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ELGAR HILL 04/29/85
NORTH EXTENSION SEB
(5) 1983 . R 388.1 06

NORTH EXTENSION

SEBASTOPOL BYPASS

ROUTE E

ENVIRONMENTAL RECONNAISSANCE

City of Sebastopol
7120 Bodega Avenue
Sebastopol, CA 95472

NOVEMBER 22, 1983

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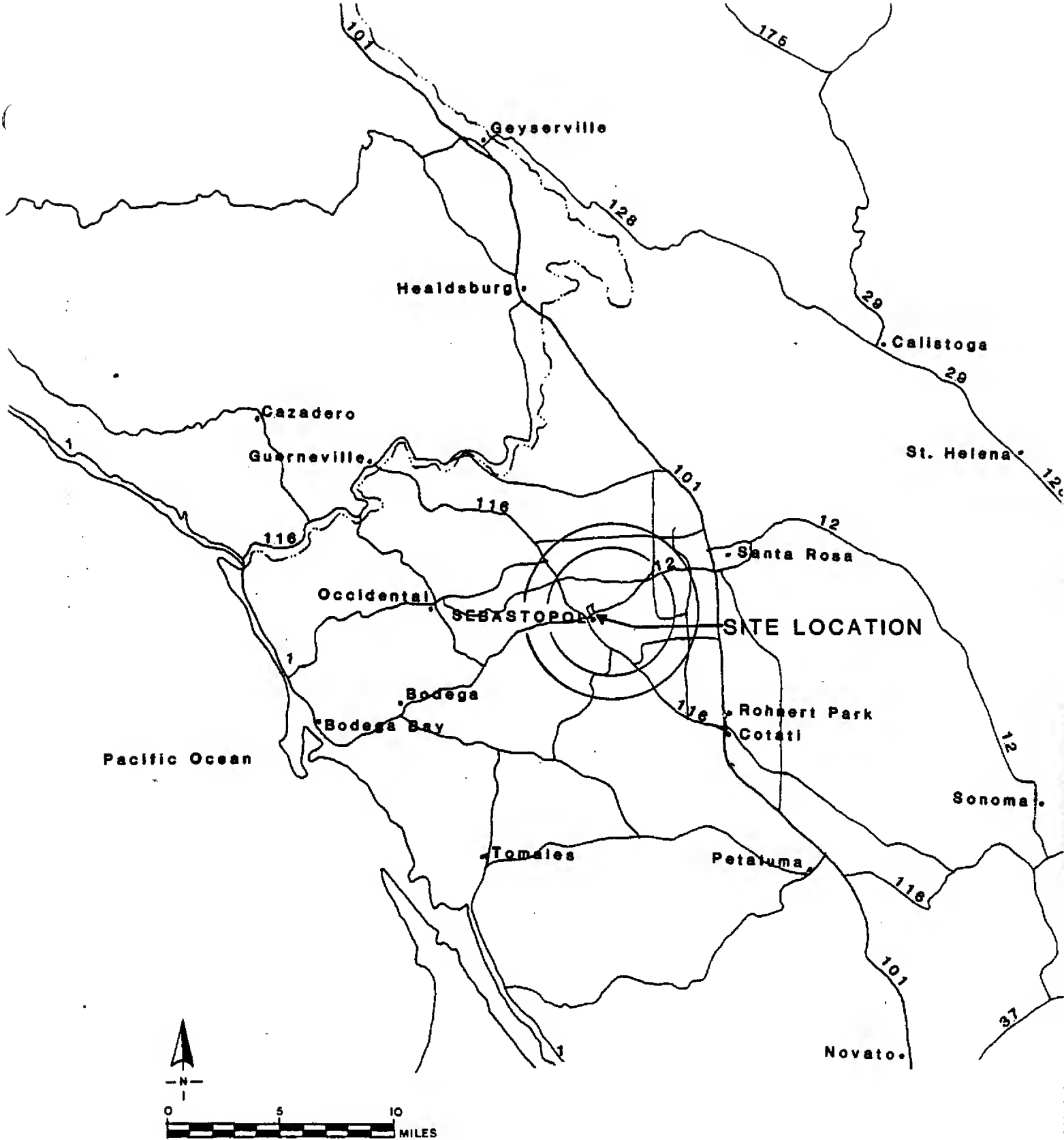
1.00 OVERVIEW

1.00 OVERVIEW

1.10 PROJECT LOCATION

Sebastopol is located on the western edge of the Santa Rosa Valley, five miles west of Santa Rosa. The size of the Study Area is approximately 55 acres, bordered by the City of Sebastopol to the west, Highway 12 to the south, open farmland to the north, the Laguna de Santa Rosa to the east. The project is located within T.7N, R.9W, entirely within Section 35 (Figure 1). The Laguna is a marshy area with generally poor drainage conditions, and occupies the lowest part of the valley, just east of Sebastopol. The Laguna collects runoff from several creeks, including Mark West and Santa Rosa Creeks to the east, and discharges into the Russian River to the northwest (Figure 2). Normally, the slow-flowing Laguna is confined to a stream channel, bordered in some places by thick stands of willow and individual alder and oak trees. During the rainy season, the Laguna regularly floods its channel and inundates a large acreages. The extent of the flooded areas varies year to year.

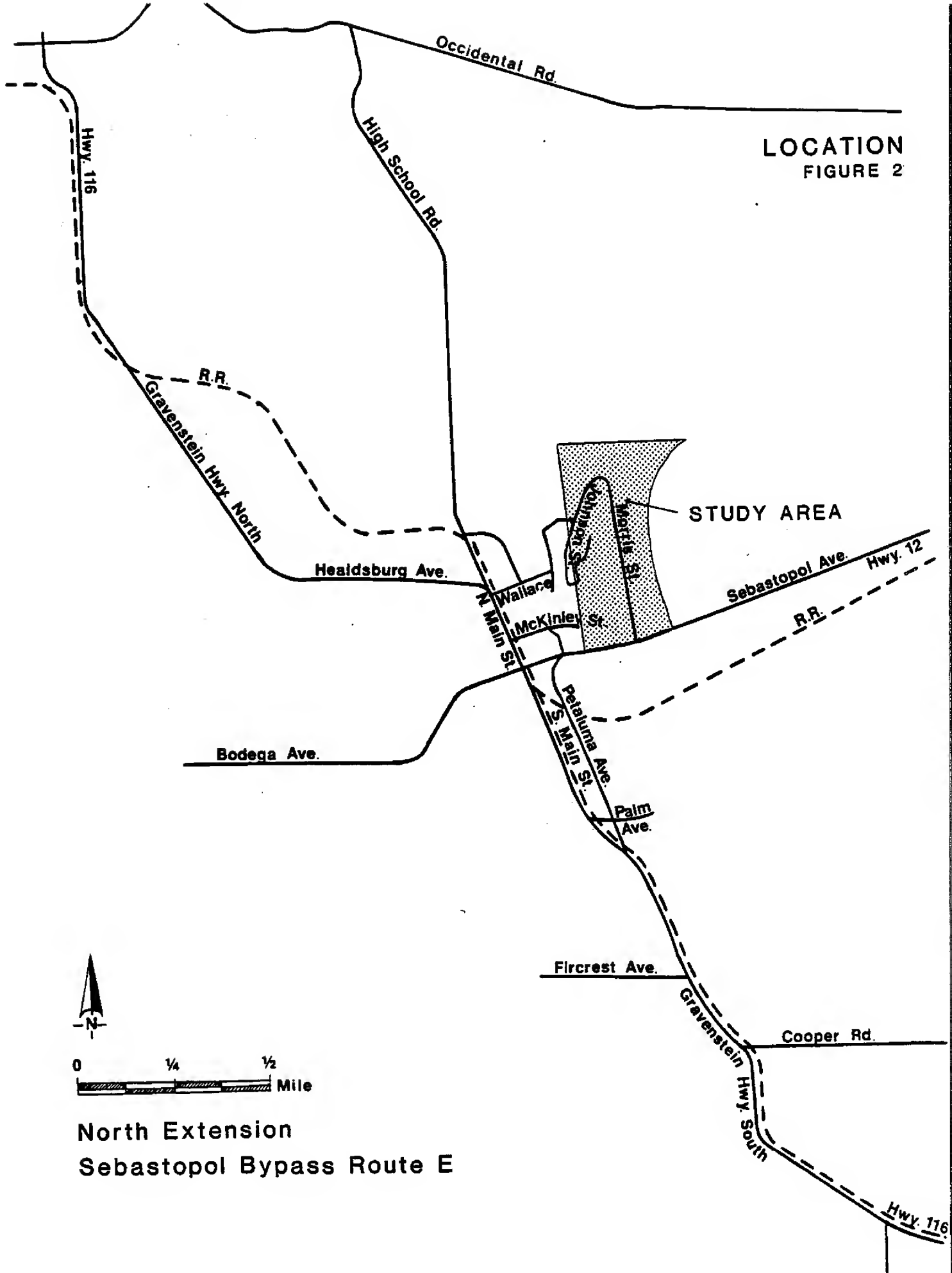
The proposed Route E Bypass is located just south of Highway 12, between the Laguna and Highway 116. A Draft EIR has been prepared for the Route E alternative alignments. The Study Area would be the location for an extension of Route E (termed Route E-North). Some information developed for the Draft EIR prepared for Route E Bypass has been found useful for this Route E-North Environmental Reconnaissance (ER). Both Route E and this Route E-North are part of a larger bypass system which would connect Highway 116 north of Sebastopol to Highway 116, south of the City. (Of the three [southern] Route E Bypass proposed alignments, only one would be implemented, if the decision to build a bypass were made). This northern link of the Route E Bypass is proposed, in the Sonoma County General Plan, to connect with Highway 12, then to Highway 116, via Occidental Road. No specific alignment has yet been proposed north of Highway 12. The purpose of this ER is to provide the basis for consideration of specific alignments through the Study Area (see Project Description). In this analysis, we are assuming an eventual Highway 12/ High School Road/ Occidental Road/ Highway 116 route. Most of this route is outside the Study Area. A Hurlbut Avenue - connected route would attract about the same amount of traffic.



North Extension
Sebastopol Bypass Route E

VICINITY
FIGURE 1

LOCATION
FIGURE 2



North Extension
Sebastopol Bypass Route E

1.20 PROJECT DESCRIPTION

The Study Area consists of approximately 55 acres north of Highway 12 and opposite the north end of the proposed Sebastopol Bypass (Figure 2). It is the purpose of this Environmental Reconnaissance (ER) to [1] describe the Study Area, [2] identify constraints to, and opportunities for, the development of a northerly extension of the Sebastopol Route E Bypass, [3] make recommendations, (on a factor basis) of mitigations available to minimize potential impacts, and [4] identify possible alternative corridors in which a roadway could cross the Study Area, based on a constraints and opportunities analysis. The northern extension of the Route E Bypass has been identified as a critical link in the overall Bypass concept (Elgar Hill, Route E Bypass Draft EIR, pages 8-18). The Study Area is the only possible location for a northern extension. This northern extension would connect with another link of the Bypass to the north (1.10, Project Location).

The Study Area has been field checked by several specialists, and their findings are included in Section 2.00, the Factor Analysis. The area to the north of the City limits is not within the Study Area; therefore, Bypass connections to the north are included for discussion purposes, only.

2.00

FACTOR ANALYSIS

2.00 FACTOR ANALYSIS

2.10 PLANNING AND LAND USE

A. Description

The 55 acre Study Area is bordered to the north by the City limits, to the east by the Laguna de Santa Rosa, to the south by Highway 12 and to the west by a spur of the Santa Rosa and Petaluma Railroad and by Johnson Street.

The Study area is divided into four Landscape Units, described below and depicted on Figure 3.

1. Northern Unit

The northern one third of the project area is presently used for three purposes: [a] Residential: The areas immediately adjacent to Eddie Lane, Sunset Avenue and Johnson Street are lined with houses, garages and other structures. The central portion of this Landscape Unit is an [b] industrial disposal area consisting of soil, sand, gravel, asphalt, concrete and other debris. The eastern portion of this landscape unit consists of [c] the site of the former sewage treatment facility and ponds, filled with treated waste water used by the adjacent dairy for irrigation. The northern boundary is marked by a levee which supports the ponds. Fill, in the northern section of the area, varies in depth from one to two and a half meters.

2. Eastern Unit

This unit is the site of three buildings: [a] The Community Services building, [b] a concrete mixing facility, and [c] a sewage lift station. South of the Community Center is a relatively flat filled area. Both the Community Center and the area to the east and south are the sites of old City dumps which have been covered with soil and partially developed. The area to the east of Morris Street and north of the ready mix concrete plant appears to be at original marshy ground level. Between the sewage lift station and Highway 12 is a open field.

3. Industrial Unit

The entire southern one third of the project area, west of Morris Street, is the site of apple processing facilities and maintenance operations. All of these uses are well established. In addition to the cannery operation, there is a small service commercial and manufacturing center. To the

north, bordered by Johnson Street, is the City's corporation yard. There is considerable remaining open area in this unit. This Landscape Unit is bordered to the west by a spurline of the Petaluma/Santa Rosa Railroad. While it is in dis-repair since January of 1982 and presently unserviceable, the Railroad is under obligation to improve the line and provide service upon demand. The Railroad has made application to the I.C.C. to abandon this line.

4. Riparian Corridor Unit

A strip of riparian vegetation and marsh comprises the eastern border of the Study Area, which widens toward the center. In some places it is relatively undisturbed, although most of the area is quite disturbed. The specific configuration of marsh is further described in other parts of this report.

Land Use Concerns

Several acres (15) of vacant land remains within the Study Area. The majority of this acreage (8 acres) are within the Manufacturing (M), Zoning, while 6 are in the community facility C-F zoning. A small section of the Study Area is zoned commercial (C-3) and is mostly developed. The area along Eddie Lane is zoned residential.

Two community projects are currently underway in the Study Area: The Morris Street Assessment District and the Laguna Youth Park Master Plan and Grant.

The Morris Street Assessment District proposes the improvement of Morris Street to two, 22 foot lanes, with curbs and gutters. Sidewalks would be installed on one side of the street only. An improved storm drainage system and waterline (fire-loop) would also be installed. A right-of-way of 60 feet is proposed. Since this street serves a number of existing, and several proposed, industrial uses, the improvements would be constructed to accommodate a high level of truck traffic. The Morris Street project would generate secondary beneficial impacts in that it would create jobs and improve access, as well as provide and improve fire protection for residents along Johnson Street. (Taken from Morris Street COBC Jobs Application; 5-23-83.)

The Laguna Youth Park Master Plan and Grant Project proposes construction of a new baseball diamond, in addition to improvement of the existing ball diamond and development of a parking area. The City has received a grant from the

National Park Service, Land and Water Conservation Fund, in the amount of \$75,000. 1/ Plans for the facility must be submitted by January 1, 1984. Planning and design is underway.

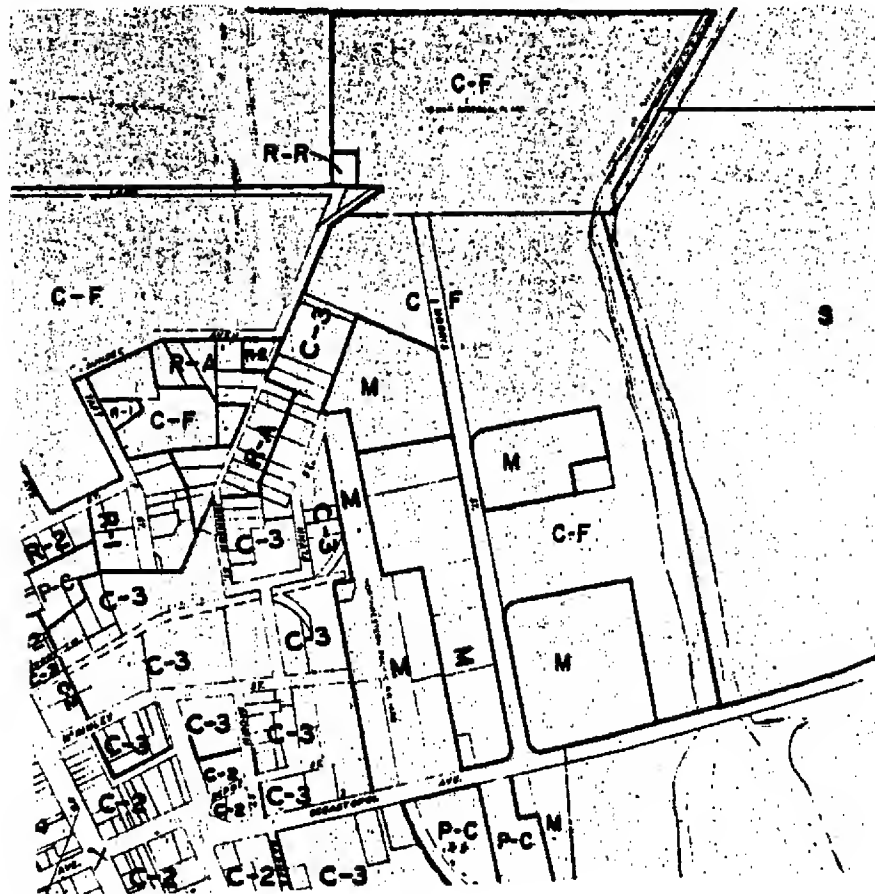
To the west of the Study Area, west of the railroad tracks, is an extension of the industrial uses, including a vacant (or partially used) cannery and other industrial and manufacturing uses.

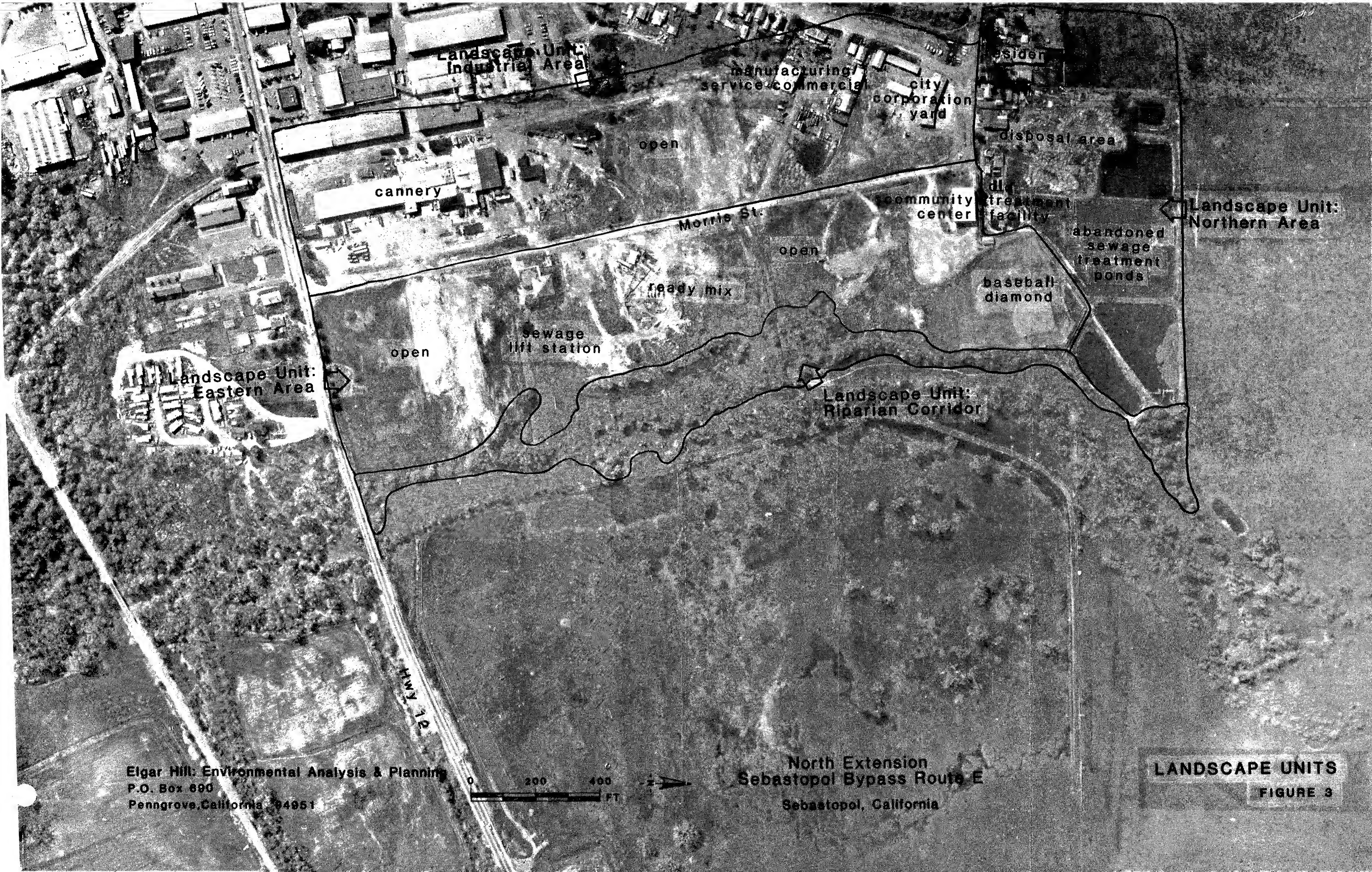
B. Constraints

All existing structures, the Youth Park Project and the Morris Street improvements are considered, to some degree, constraints to the location of the extension of the Bypass. According to City plans, the area will eventually be the location of additional industrial uses, downtown commercial along Highway 12 and in open space along the Laguna. These uses would not constrain a Bypass.

C. Recommendations

Any extension of the Bypass alignment should take into consideration existing structures, those in the planning stages, and long range City needs.





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North Extension
Sebastopol Bypass Route E
Sebastopol, California

LANDSCAPE UNITS
FIGURE 3

2.20 TRAFFIC AND CIRCULATION

A. Description

The Study Area is being evaluated in order to establish the feasibility of an appropriate alignment for the Sebastopol Route E Bypass, Northern Extension. This segment of the proposed Bypass system will link the Route E Alignment (see DEIR, Route E Bypass) (south of Highway 12) with still another, yet to be selected, link: north of the City limits to High School Road, then Occidental Road to Highway 116 (see Figure 4). Currently, there is not a through traffic route in the Study Area, which is divided into two parts by Morris Street, a partially improved City street. The southern end of Morris Street intersects with Highway 12 (Figure 4). Near the north end of the Study Area, Morris Street makes a sharp (150 degree) left turn into Johnson Street (Figure 4). Eddie Lane, a narrow, one lane street, intersects the Johnson/Morris connection on the northern (outside) segment of the curve and connects with High School Road at its other end. There are no other streets in the Study Area, except Depot, McKinley and Flynn Streets, in the southwest corner.

The western border of the Study Area is the site of the Petaluma and Santa Rosa Railroad spur tracks, which have served the adjacent industrial buildings. The buildings to the west of the Railroad spur are vacant and do not currently depend upon the railroad. The buildings to the east of the railroad are also currently not using the railroad but maintain the option of requesting service.

Based on the Route E DEIR findings, the 1983 volumes on this northern extension would be 1050 2-way peak hour trips. 350 of these are north - east trips and 550 are north - south trips. Trips on Highway 12, west of the Bypass, (assuming with a Bypass) are projected to be approximately 1000 2-way peak hour (Year 2000). Today's trips on this segment approach 1550 (2-way peak hour). Trips west of the Bypass will be lower than existing, because of the Bypass. East of the Bypass, Year 2000 volumes on Highway 12 will be 2200 (2-way peak hour) trips (Figure 5).

This level of traffic would require that Highway 12 be widened to four lanes. Improvement of the Highway 12 Bridge across the Laguna would also be required, whether or not the Bypass is completed. The intersection of Highway 12 with the Route E Bypass and this Route E - North would require signalization. A left turn stacking lane on Highway 12 (Figure 6), and a minimum of 400' from the Laguna Bridge (to

avoid widening the bridge by a 5th lane by the Year 2000) would be required.

B. Constraints

Three general traffic corridors through the Study Area are described and evaluated in the Summary (3.00).

1. Railroad Spur
2. Morris Street
3. Eastern Edge

Several constraints to traffic are associated with each of these corridors and with traffic conditions on Highway 12.

1. Railroad

The spur line of the Petaluma/Santa Rosa Railroad forms the western boundary of the Study Area. This spur, though in poor repair, is described by a Petaluma/Santa Rosa Railroad representative as an active line and must be reinstated for service, by the Railroad if requested by the adjacent property owners. In addition to the spur line, adjacent landowners to the east hold a 40 ft. wide easement into the 100 ft. railroad corridor, and have indicated plans to build adjacent to the railroad (Personal Communication, Tom Barlow, October, 1983).

2. Morris Street

Plans for an improved Morris Street are underway. The Assessment District has been formed to partially fund the project, which consists of water, storm drains, sidewalks and a 44 foot paved section along Morris Street (see 2.10, Land Use).

Two cross-sections have been considered; these are shown on Figure 7. After improvements have been completed, traffic levels on Morris Street will be 100 trips/peak hours, or 1000/day. In the Year 2000, 150 trips/peak hour are expected.

An extension of the Route E Bypass along Morris Street would require a separation of the industrial traffic from the Bypass traffic, as well as a connection of the Bypass with the industrial areas. Possible ways of achieving these goals are presented under recommendations, below.

The right-of-way on Morris Street is 60 feet, which is adequate for the Bypass but is not adequate for both Bypass and Industrial traffic corridor.

3. East of Morris Street and The Riparian Corridor:

Two constraints are associated with the eastern edge of the Study Area: [1] the sensitivity of the wetlands, which would need to be crossed, (see 2.50, Vegetation and Wildlife), and [2] the proximity of the Highway 12/Bypass Intersection to the Laguna Bridge. A distance of 400 feet from the bridge to the intersection is desirable for the left turn pocket on Highway 12 (see Figure 8).

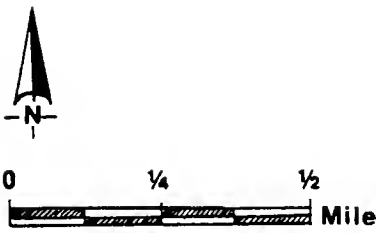
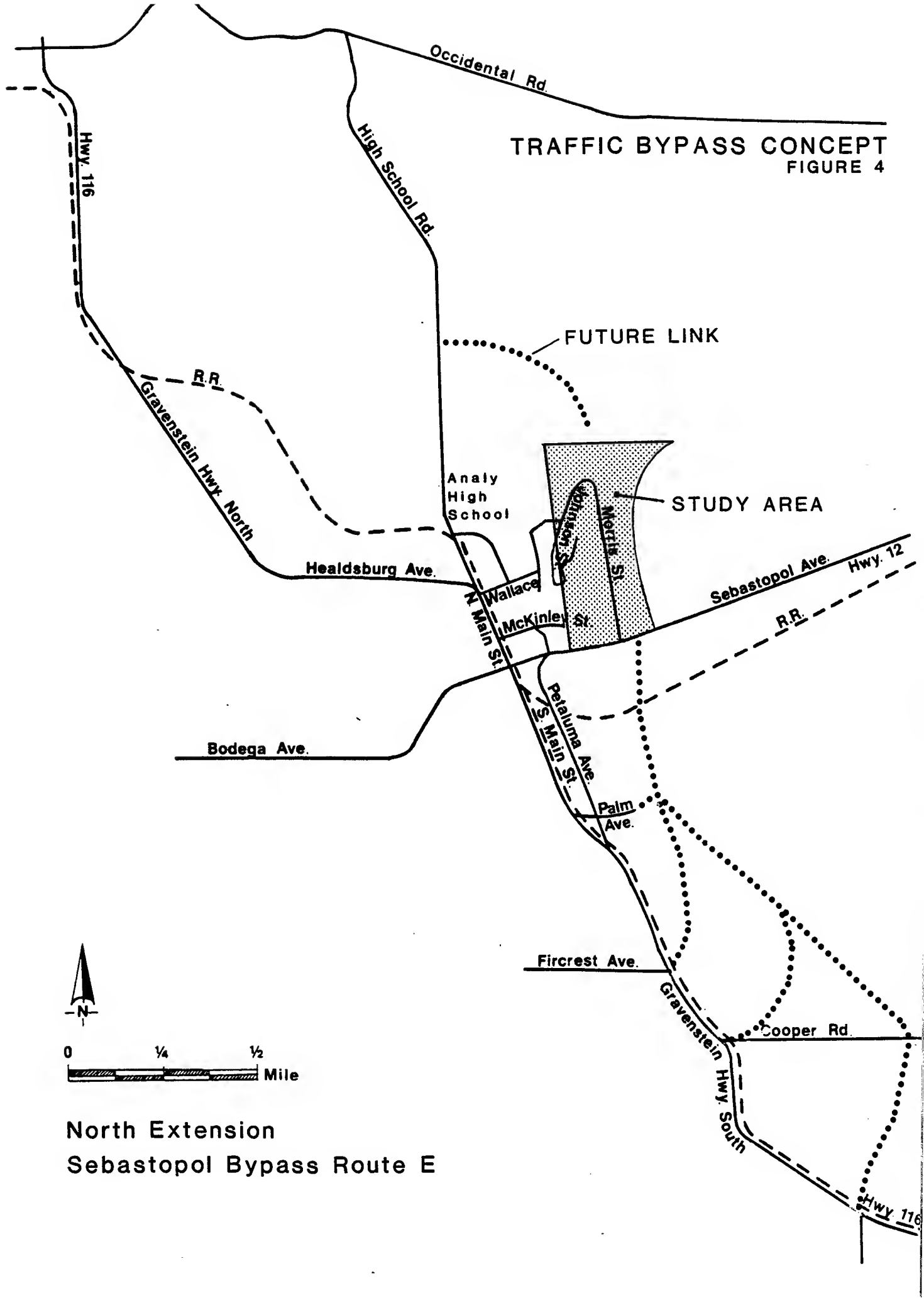
4. Signal Spacing:

Along Highway 12, from its intersection with Highway 116 to the Laguna Bridge crossing, three intersections would be signalized. These are [1] Highway 116/Highway 12 (the main intersection already signalized); [2] the Petaluma Avenue/Highway 12 proposed signalized intersection; and [3] the Bypass/Highway 12 signalized intersection. One quarter (1/4) mile is considered an appropriate minimum spacing between signals. A 400' distance from the Bypass to the Laguna Bridge is necessary for a turning pocket. The Highway 116/Highway 12 intersection and the Petaluma Avenue/Highway 12 intersections are less than 500 feet apart. A distance of one quarter mile (1/4) east of Petaluma Avenue, would be a point east of Morris Street, less than 400' from the Laguna Bridge (Figure 8). If all three signals were to be implemented, the distance between each would be less than the recommended distance for smooth traffic flow: as a result signals could not be timed to allow progression in both directions, only in one direction.

C. Recommendations

A 60' right-of-way will be needed for the Bypass - North Extension. This will accommodate the Year 2000 total of trips on the North Extension (equal to approximately two lanes of traffic). One hundred plus feet of right-of-way would be required if both through (Bypass) and industrial traffic were combined on Morris Street. To expedite through flow and limit disruption of industrial traffic, it is not considered prudent transportation planning to combine the industrial and Bypass traffic on a single street. Considerable delay resulting from numerous traffic conflicts (left turn truck versus through bypass traffic) would occur.

TRAFFIC BYPASS CONCEPT
FIGURE 4



North Extension
Sebastopol Bypass Route E

xxx YEAR 2000 PREDICTED
VOLUMES ADT'S
(xxx) TODAYS VOLUME

Morris Street

ROUTE E BYPASS-
NORTHERN EXTENSION

5500

3500

10000
(15500)

22000

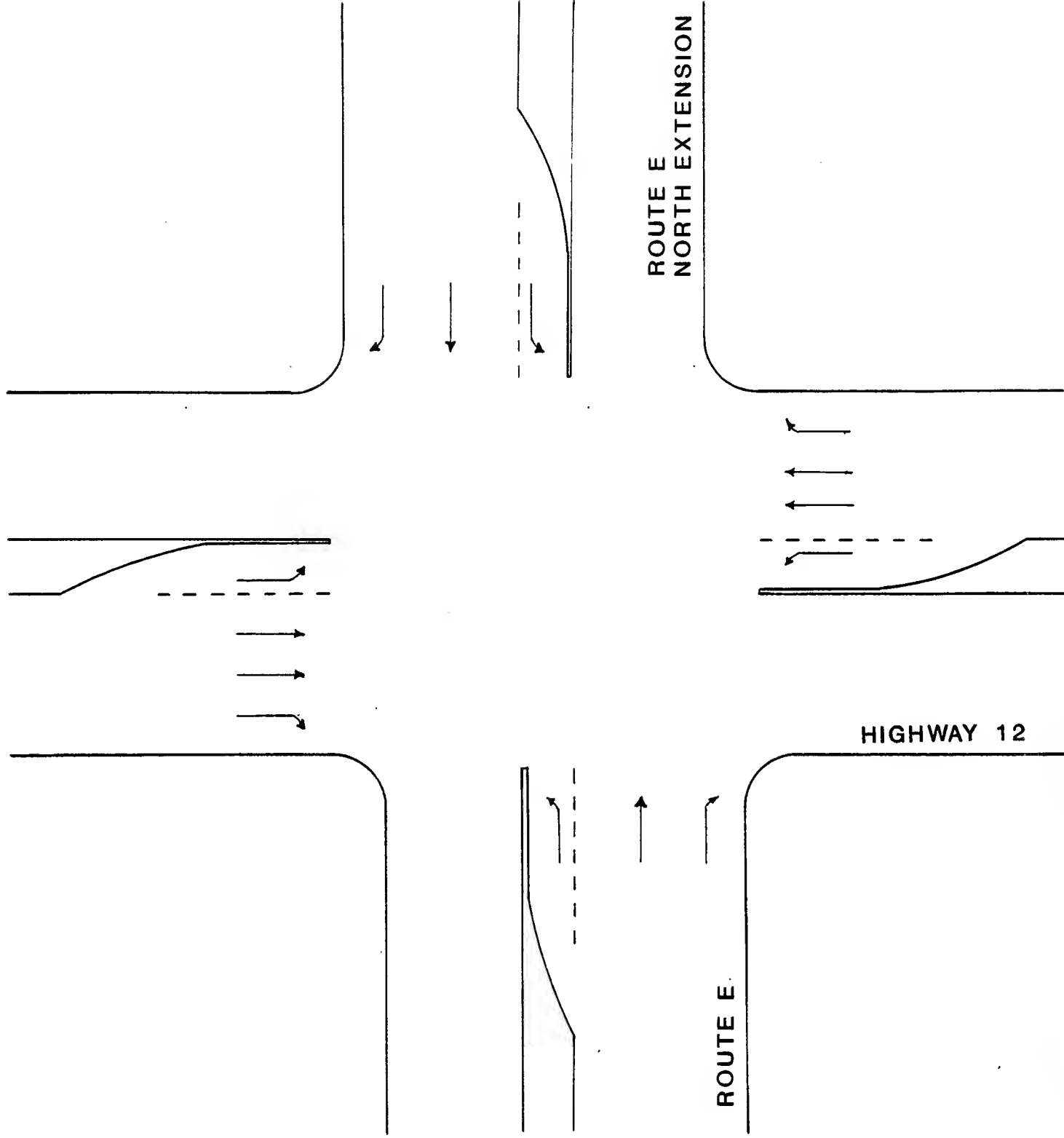
Hwy 12

ROUTE E BYPASS
SOUTHERN EXTENSION

12000

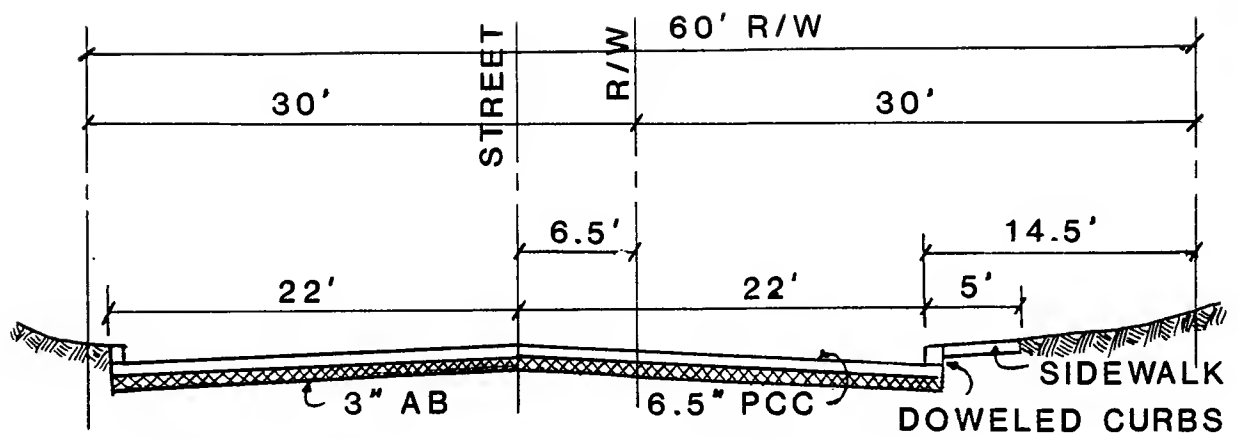
North Extension
Sebastopol Bypass Route E

TRAFFIC COUNTS
FIGURE 5

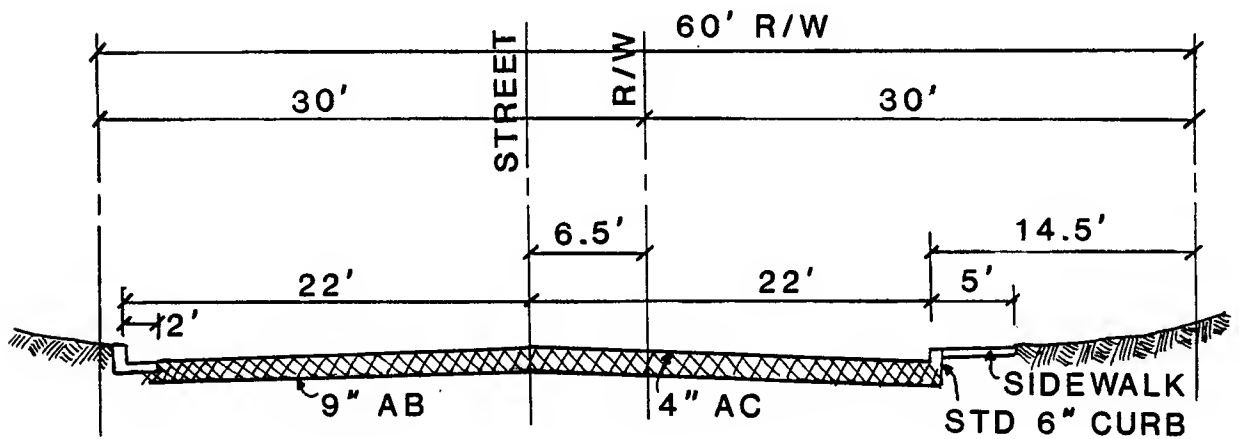


INTERSECTION OF
BYPASS AND HIGHWAY 12

FIGURE 6



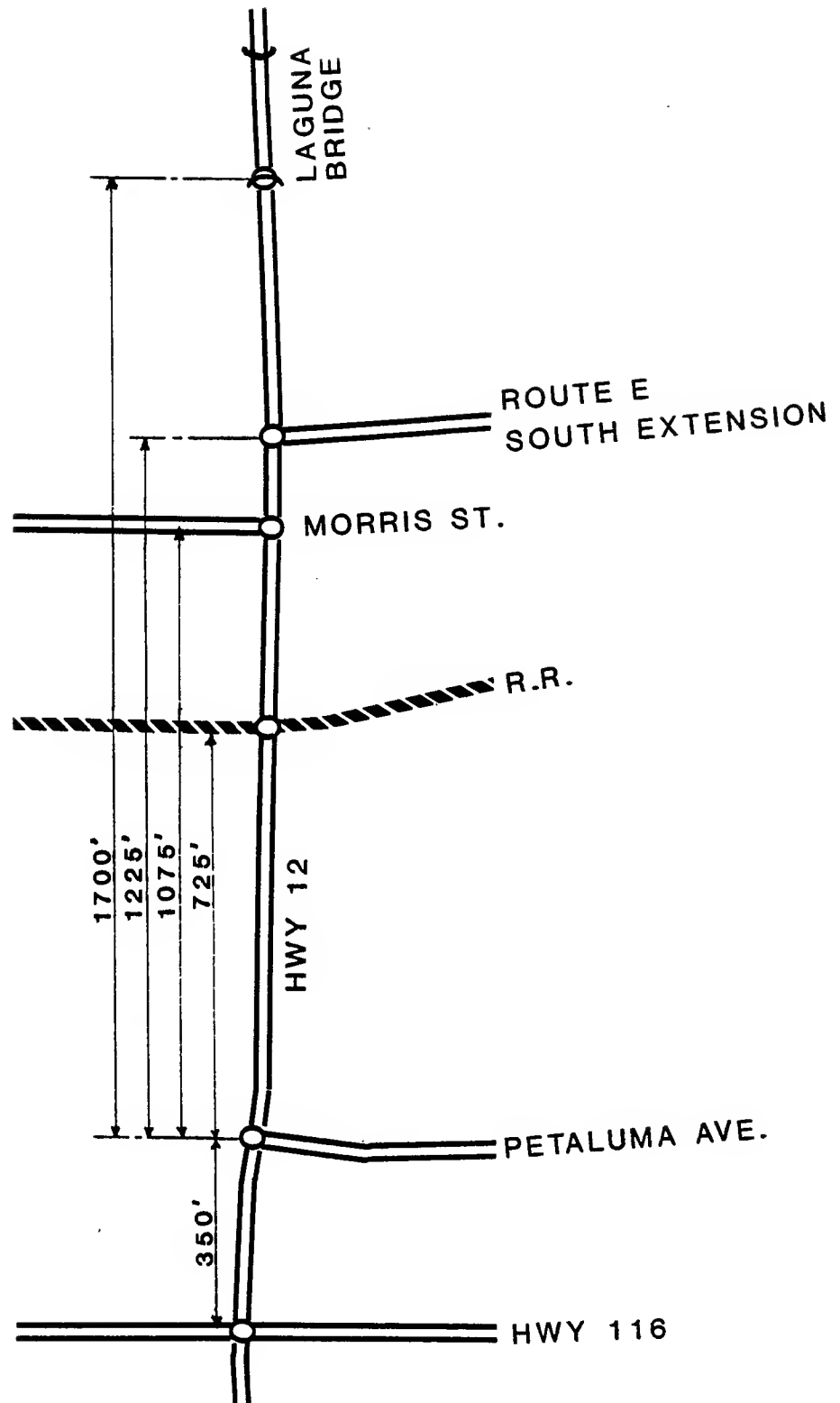
ALT "B" PCC



ALT "A" AC

MORRIS STREET DIAGRAM CROSS SECTIONS

FIGURE 7



**SCHEMATIC OF
INTERSECTION LAYOUT**

FIGURE 8

2.30 GEOLOGY AND SOILS

The lowest portions of the Santa Rosa Valley are filled with up to several hundred feet of unconsolidated stream channel and flood plain deposits, predominantly silt and clay, but containing small, discontinuous gravel lenses. The low hills, which border the west side of the valley in the vicinity of the subject site, are underlain by poorly consolidated medium to fine grained marine sand, sandstone and silty clay, along with minor interbeds of gravel and pebbles belonging to the Merced Formation.

Site Conditions

Topographically, the Study Area can be characterized as a low-lying alluvial flood plain bordering a gently sloping hilly region, on a line along the western margin, near Johnson Street. Elevations range from approximately 55 to 65 feet above sea level. The lowest elevations occur in the marshy area of the flood plain associated with the Laguna de Santa Rosa Control Channel, located along the eastern boundary of the Study Area. The marshland includes several closed depressions on the east side of Morris Street. In addition, the Sebastopol 7.5 minute quadrangle, which is based on aerial photographs taken in 1952, shows a lagoon, on the west side of Morris Street, in the area of filled marsh (Figure 9). This feature still remains. The areas shown as marshland are covered with a thick growth of water-dependent plants. The water table in the marshland is near, or above, the ground surface. The area is partially inundated by flood waters from the Laguna during the winter months.

The former marsh areas west of Morris Street, and much of the former marsh areas to the east, have been covered with imported fill. These areas are identified on Figure 9. Drainage of the lands, between Morris Street and the railroad tracks, flows easterly to several culverts under Morris Street, which discharge into drainage ditches, which in turn discharge into the Laguna.

Alluvial flood plain deposits occupy areas in the south portion of the Study Area around McKinley Street, east of Johnson Street, and in the pasture area north of the sewage treatment ponds. The gentle hillslope at Johnson Street is underlain by poorly consolidated fine grained friable sandstone of the Tertiary -age Merced Formation. No indication of landsliding or other ground shifting was observed in the Study Area during the reconnaissance.

Soils

Excluding the portion of the property shown as Merced Formation, all of the Study Area consists of alluvium or fill over alluvial deposits. The alluvial soils are expected to have a shallow groundwater table and to consist, in large part, of fine grained outwash deposits of sand and silt.

The Soil Conservation Service (SCS) has divided the land in the Study Area into two soils series (Figure 10). Table 1 described soils in terms of their general characteristics.

One soil series, Blucher fine sandy loam and Blucher loam, supports all of the riparian vegetation. Blucher soils carry a Class II rating (Prime Agricultural Soil), with the provision that drainage must be provided, especially for tree crops. Drainage, in this case, would require pumping and levees.

The Sebastopol series soils tend to be located on the higher slopes, and, in Sebastopol, support housing or other development. They are not classified as Prime Agricultural Soils; their capability for agricultural use is Class III and IV (erosive).

As described above, much of the area is covered with imported fill; the soils characteristics of the filled areas are unknown and would be completely different from the original soils.

Seismic Hazard

The major active faults in the area include the San Andreas Fault, located 13 miles southwest of the site, and the Healdsburg/Rodgers Creek Fault, located 7 miles northeast. Both of these faults have generated earthquakes which have caused moderate to strong ground shaking in the site vicinity during historic times. Maximum probable bedrock acceleration due to an earthquake on the San Andreas and the Healdsburg/Rodgers Creek faults are 0.43g and 0.28g, respectively. It is reasonable to expect that strong ground shaking could occur during the lifetime of the proposed road. By itself, strong ground shaking is not likely to damage a properly constructed roadway, but it has the capability of inducing other phenomena that can cause substantial damage. These phenomena include soil liquefaction, lateral spreading, differential compaction and seiches.

B. Constraints

1. Soil Liquefaction

During strong ground shaking, a saturated cohesionless soil deposit located near the ground surface may undergo loss of strength during cyclic loading, a phenomenon categorized as soil liquefaction. During the loss of strength, the soil acquires a mobility sufficient to permit both horizontal and vertical movements. Fine grained sand and silt outwash deposits, such as are expected to occur adjacent to the Laguna, are soil types susceptible to liquefaction. Lateral spreading, a downslope movement sometimes resulting from liquefaction of granular soils, and differential compaction are types of ground failure which are associated with liquefaction.

2. Other Geologic Hazards

Damage from other geologic hazards, such as fault offset movement, landsliding, or displacement of water against the road embankment due to a seiche, are considered extremely remote.

3. Prime Agricultural Soils

The Blucher series are prime agricultural soils, but need to be drained in order to be used for extensive agriculture. More than half of this services is covered with fill. This is not a major constraint to location of a road.

C. Recommendations

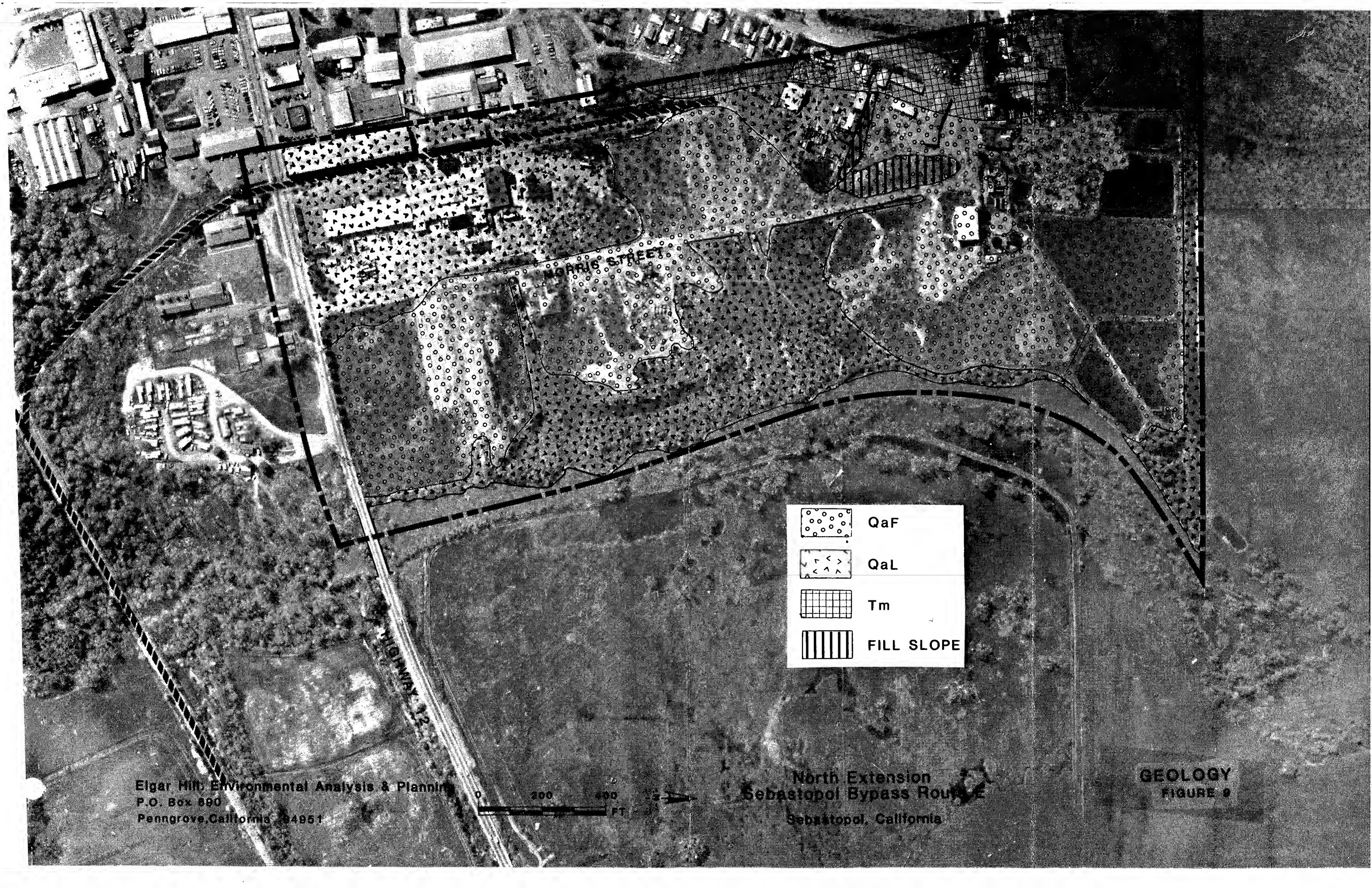
Measures to mitigate the liquefaction hazard along the route are expensive and not considered necessary for a roadway, although such measures are considered necessary in the design of building structures.

If an alignment were to follow along the railroad right-of-way, marsh soils would be encountered at 600-1400 feet north of Highway 12. Fill would be required. An alignment generally following Morris Street would also require some filling of marshy lands. A route between Morris Street and the Laguna would cross both filled and unfilled marsh. There are several depressions in this area and as much as ten feet of fill could be required in the areas where the road crosses the marsh. If the marsh soils were found to be thick, surcharging might be required in

order to control road bed settlement. Due to its proximity with the Laguna, this route would be the least suitable, from the standpoint of ground performance, during a strong earthquake.


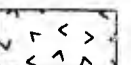


TABLE 1
SOILS CHARACTERISTICS

SOIL	CLASS	DEPTH BEDROCK	DEPTH TO SEASONAL WATER TABLE	DEPTH FROM SURFACE
BcA: Blucher Fine Sandy Loam	IIw-2	>5 feet	3 1/2-5	0-34
Silty Clay Loam and Silt Loam				34-72
Cfa: Clear Lake Clay, Ponded Clay Loam Surface	IIIw-5	>5 feet	3-5	0-60
Sandy Clay Loam				60-72
SbC: Sebastopol SbD: Sandy Loam	IIIe-1 IVe-1	>5 feet	--	0-8 8-18
Clay and Heavy Clay Loam				18-62



MORRIS STREET

HIGHWAY 1

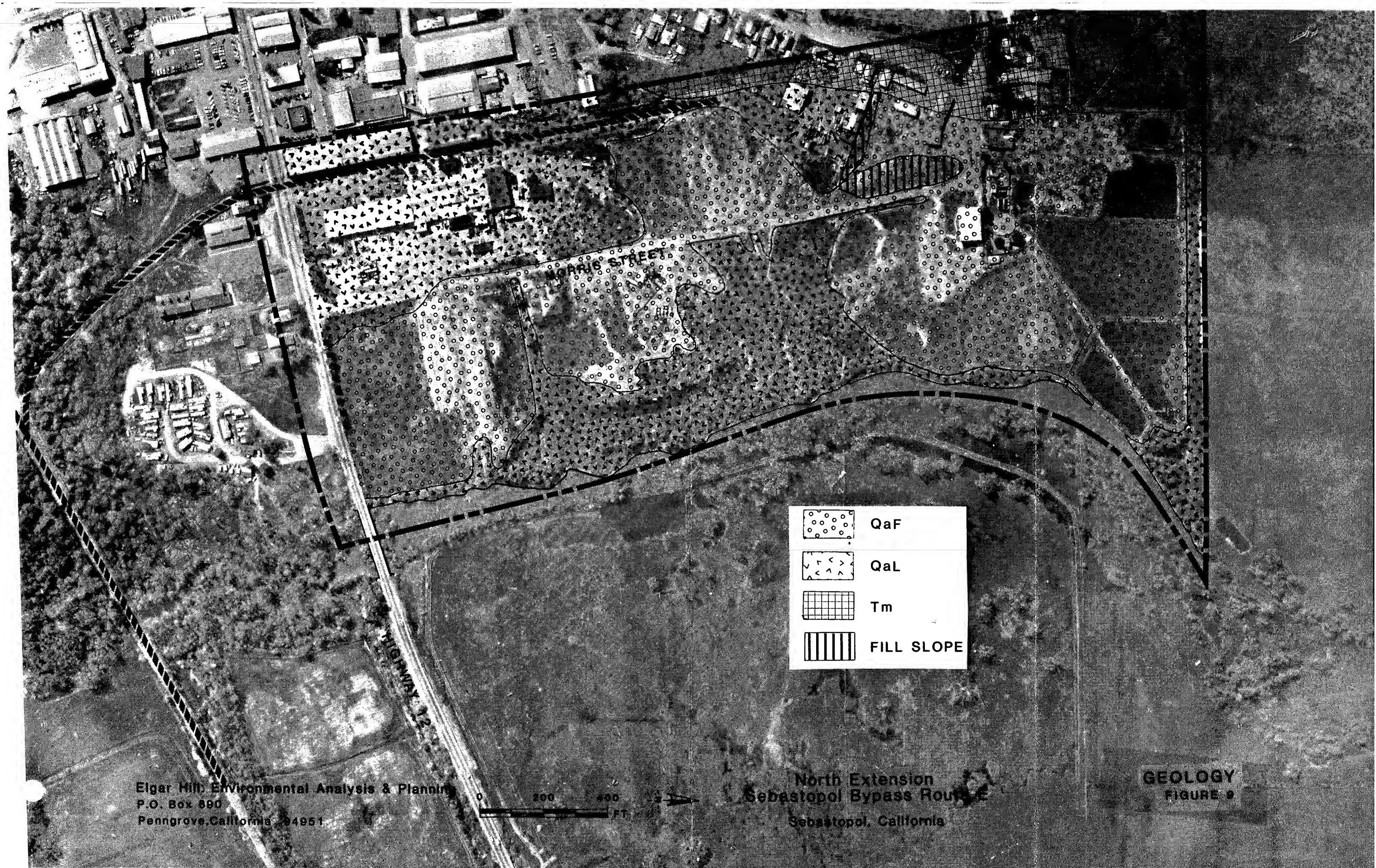
	QaF
	QaL
	Tm
	FILL SLOPE

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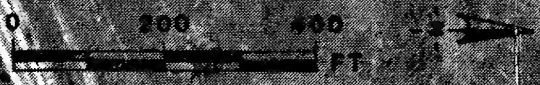
North Extension
Sebastopol Bypass Road
Sebastopol, California

GEOLOGY
FIGURE 9



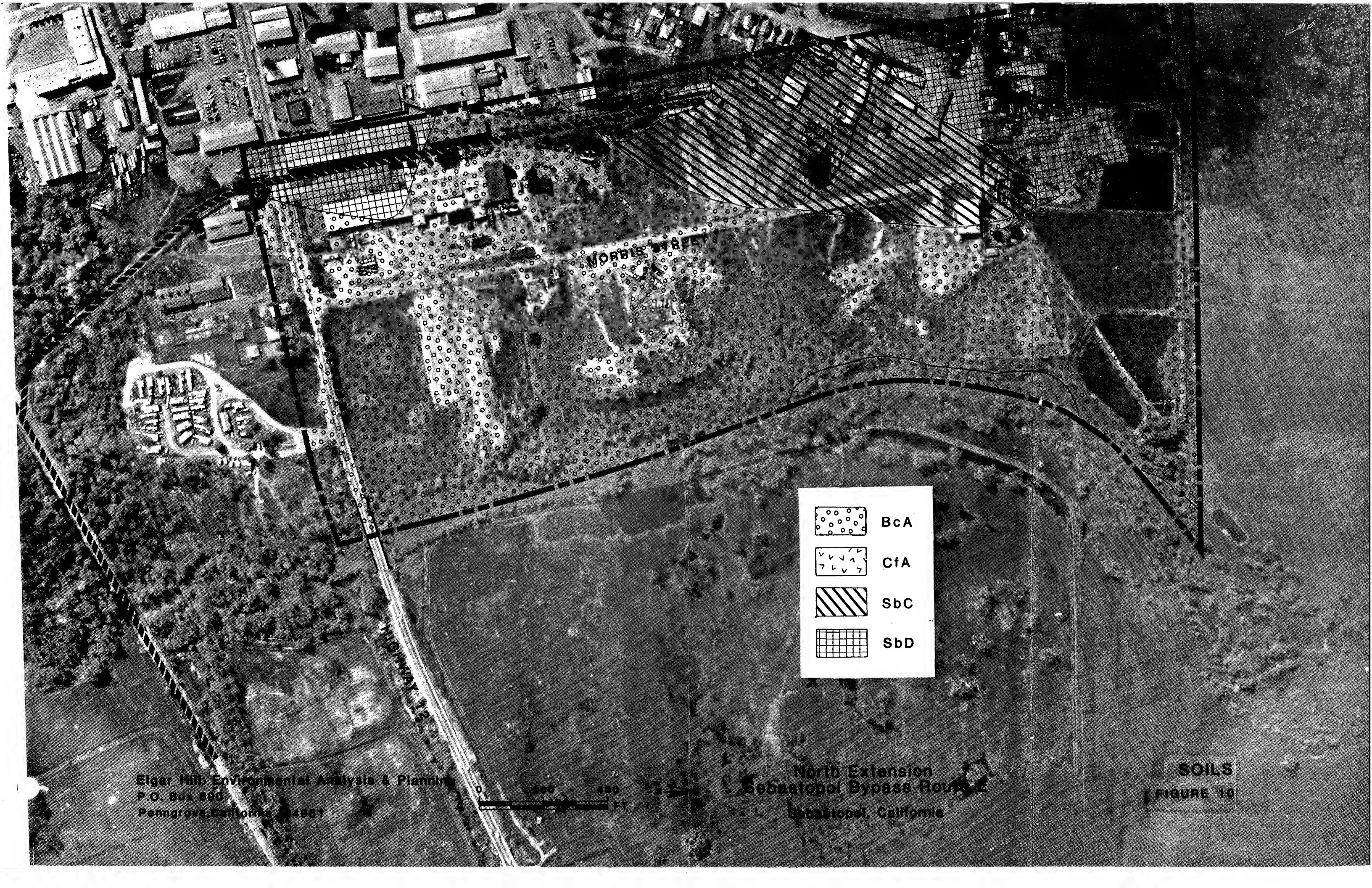
	QaF
	QaL
	Tm
	FILL SLOPE

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North Extension
Sebastopol Bypass Route
Sebastopol, California

GEOLOGY
FIGURE 9



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North Extension
Sebastopol Bypass Route
Sebastopol, California

SOILS
FIGURE 10

2.40 HYDROLOGY AND DRAINAGE

A. Description

The eastern border of the Study Area follows the Laguna de Santa Rosa. Runoff to the Laguna in the Study Area is either direct, by sheet flow, or through drainage ditches into the Laguna. Much of the Study Area lies over areas with poor surface drainage, including closed depressions or ditches (some with vegetation) and gently sloping swales extending from the higher ground to the west. Standing water occurs in the entire undeveloped eastern portion through late spring. Nearly the entire Study Area was at one time a wetland, similar to the extreme northern portion of the alignments assessed in the Route E EIR. Much of the western half of the Study Area has been filled over the last 30 years. Two large portions of the eastern area (land to the east of Morris Street) have also been filled and developed (Figure 11).

Groundwater

Groundwater location is expected to be similar to that presented in the Route E DEIR and could be at depths ranging from two to three meters, although it is higher on the eastern part of the site. Groundwater is especially high in the low-lying marsh, east of Morris Street (in fact, on the surface in some places). Numerous areas of lush vegetation and water-dependent plants suggest seasonally shallow (at least) groundwater conditions. Fluctuations, related to climate, can be expected in the water table. Saturated topsoils and standing surface water were observed in and around the northernmost drainage ditch. A seepage was also observed in the northeast corner of the site; this seepage has probably resulted from seepage through the embankment of one of the former sewage treatment ponds. Seasonally high groundwater levels are also probable in the areas shown as closed depressions and filled marsh near the railroad tracks and the pasture land along the northern border of the Study Area (Figure 11).

Flooding

The U.S. Department of Housing and Urban Development (HUD) has established a 76-foot contour as the level for the 100 year flood in the area of Laguna de Santa Rosa. It is anticipated that when the filling of Warm Springs Dam is completed in 1986, the 100 year flood elevation will be reduced by about 3 to 3 1/2 feet. Records show that low lying areas, including Highway 12 to the east of downtown

Sebastopol, flood about every five years.

The approximate location of the 100 year flood line is shown on Figure 11. It is obvious that most of the property lies within the 100 year flood limits and that any road alignment would have to address the possibility of flooding. Since the 7.5 minute topographic map shows an existing elevation of 60 to 65 feet along Morris Street and Highway 12, it does not appear practical to raise the road grade above the 100 year flood level. The benefits associated with protecting the new road against flooding may be marginal, since Highway 12, where it meets the Bypass, is subject to flooding.

During periods of flooding, storm water runoff has been retarded in streams which are tributary to the Laguna, causing flooding above the 100 Year Flood line.

Laguna de Santa Rosa

The Laguna has been described in a number of documents. The primary values of the Laguna are as a resource wildlife habitat, agricultural value, and as a major retention basin which is critical to flood-reduction in the Russian River Basin. (For further discussion, see Route E DEIR, page 29.) This flood level is expected to decrease by 3' during the 100 Year Flood, after implementation of Warm Springs Dam/Lake Sonoma as a flood controlling facility (personal Communication, Gary Hershendorfer, U.S. Army Corps of Engineers). Because the Laguna has such a shallow gradient, stream velocities are generally less than one foot/second, except where obstacles occur, and surface water has been observed to slowly flow upstream. Because of this slow movement, erosion is a minor problem, and deposition occurs over much of the area.

B. Constraints to Development

The Study Area is divided into four Landscape Units, for purposes of evaluation of Bypass extension potential (Figure 3).

Eastern Unit

This portion of the Study area extends from Morris Street to the Laguna. Only a very slight change in slope is encountered. During the winter months, the water level will be, at times, standing at the surface. Elevations vary from approximately 55 to less than 65 feet. The only drainage development in this area consists of two long drainage ditches from Morris Street to the Laguna. A short drainage,

the outlet of Zimpher Creek, is located near the southeast corner of the Study Area. To the west of this outlet, Zimpher Creek is encased with a 60" reinforced concrete pipe.

Riparian Corridor Unit

Over 1/3 of this area is marshy (more than 10 acres), including a large (one acre) closed depression in the marsh. The soils are all Blucher Silty loams and do not drain well.

Industrial Area

Most of the western portion of the Study Area has been filled. Drainage is generally surface runoff to a drainage swale along the western side of Morris Street. After improvement, Morris Street will have storm drains and sidewalks. Underground storm drains occur in the area to the west of the railroad spur, outside of the Study Area.

Northern Unit

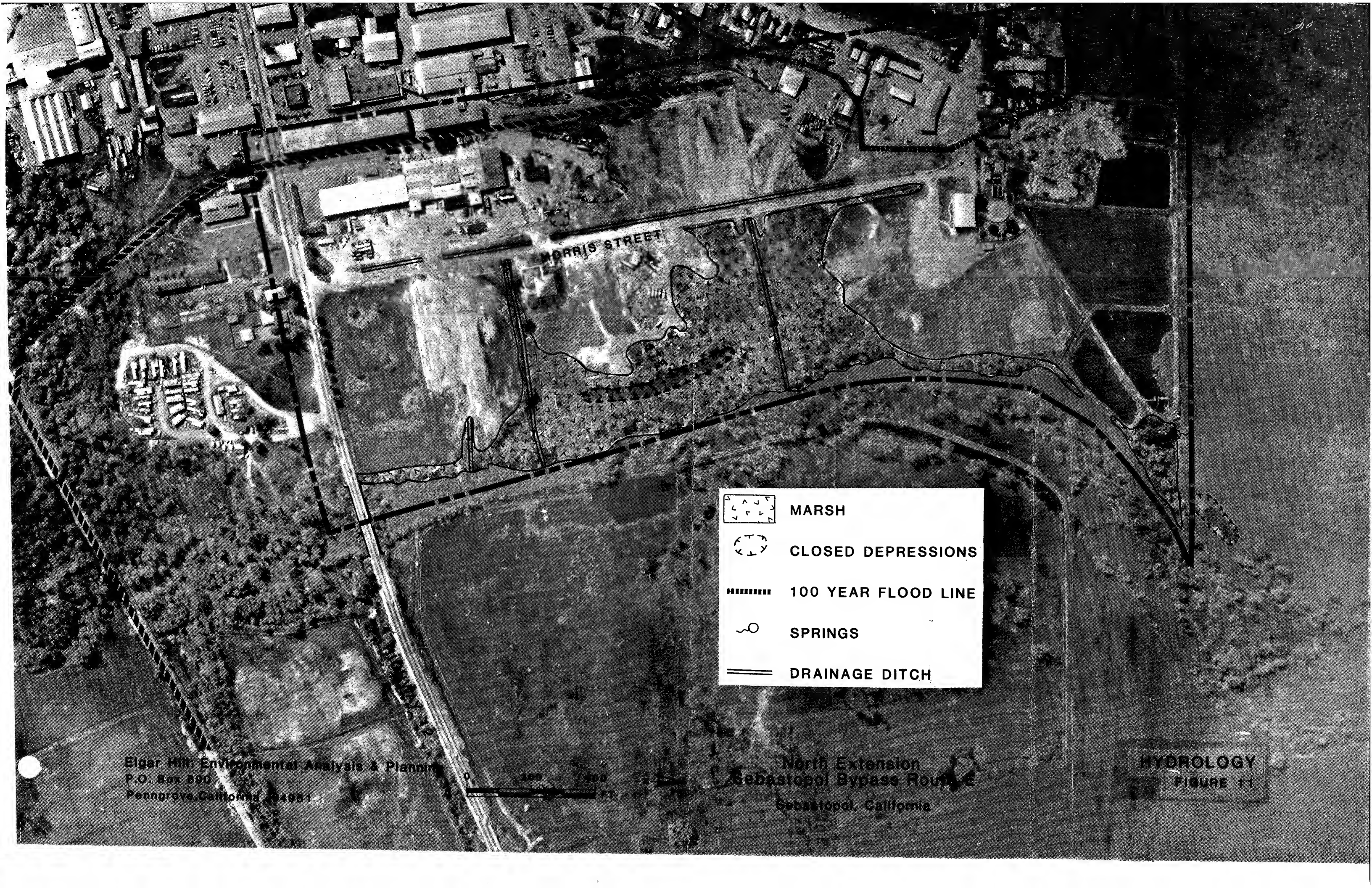
This area has been highly developed and poses no constraints to development in terms of hydrologic factors, other than that decisions regarding retention of the of the abandoned sewage treatment ponds need to be made.

C. Recommendations

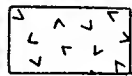



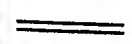
Culverts, if needed in the marshy area to the east of Morris Street, should be of adequate size so that flows from the 10 Year Flood would not be constrained. Streambed and streambank maintenance, both immediately upstream and downstream from such obstructions, should be considered in culvert design.

It will be necessary to provide a system of roadbed drainage, below the roadway fill, to prevent the buildup of hydrostatic pressure within the fill itself.

Any construction should occur during the summer months, when soils are not saturated and depressions are dry.



MORRIS STREET

-  MARSH
-  CLOSED DEPRESSIONS
-  100 YEAR FLOOD LINE
-  SPRINGS
-  DRAINAGE DITCH

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0 200 400
FT

North Extension
Sebastopol Bypass Route
Sebastopol, California

HYDROLOGY
FIGURE 11

2.50 VEGETATION AND WILDLIFE HABITAT

A. Description

The Study Area, although it supports a considerable growth of native vegetation, has been greatly disturbed over the years. Much of the area has been filled and paved, or at least recently graded, and supports no vegetation at all. Fill has been deposited on much of the rest of the area, as well. Even the riparian corridor along the Laguna de Santa Rosa exhibits many signs of past disturbance, both recent and of longer standing. Surprisingly, in spite of all this, behind, and to the north of, the concrete plant is a good quality marshland which supports large wildlife populations.

Filled Land

Fill has been placed at several levels. At the lowest level of fill, to the east side of Morris Street, the year-around water table is near the surface. For this reason, riparian species have appeared in some places. Near Highway 12, not only willow and ash can be found, but three small oak trees are growing there, as the native vegetation begins to come back. For a description of resulting plant community, if left undisturbed, see the Route E Bypass DEIR.

Along the railroad spur track, near the west edge of the Study Area, and along a drainage ditch, and a closed depression, several willow, oaks and acacia trees grow out of blackberry thickets in this depression.

Adjacent to Highway 12, a number of palm trees and one monkey-puzzle tree (*Arancaria Imbricata*) have been planted. Halfway between the highway and the sewage lift station, a single row of small trees, planted for landscaping purposes, grow. The lift station building (and the community center) have extensive associated landscaping. Recently-planted landscaping surrounds the City corporation yard. The homes along Eddie Lane are sheltered by numerous trees. The corner adjacent to the High School playing fields is covered with blackberry vines and oak trees. The filled area south and east of the community center and baseball field shows signs of flooding and standing water, including thinly-deposited silt. As a result, this area is well represented with water-loving plants, including sedge.

Riparian Corridor and Marsh

The vegetation, along the banks of the Laguna is predominantly willow, although a number of ash, alder and

oak trees are represented. Almost none of the oak and ash trees are of large stature. On the other side of the Laguna, on City-owned property, the east bank is bordered by an almost pure oak stand, which gradually phases into an oak savannah. Except for the effects of grazing pressure, this represents a mature riparian woodland, unlike that along the west bank.

Behind the concrete plant, a large, closed depression (approximately one acre) is bordered on the west side by a line of moderate-sized oaks. The marshy swale shows indications of standing water until late in the year, although it is relatively dry now. A small ditch, aligned with the south side of the lift station, and emptying into the marsh, is bordered by a few willows, and many small willows are growing in the channel.

North of the concrete plant, the marsh broadens and extends to the eastern edge of Morris Street. A large, water-filled drainage ditch connects a storm drain at the street with the Laguna. Tailings from the concrete plant are gradually encroaching on the marsh, to the north and to the east. The total marsh area is more than 10 acres in size.

Succession in Riparian Woodland and Marsh

The riparian corridor, if not further disturbed, would be expected to diversify and increase in size, over time. Although the willows would continue to be present, additional species, such as Oregon Ash, Box Elder, Oak, California Bay and Big Leaf Maple, would become more prevalent, resulting in a more open and diverse tree canopy, which would lead to more diversity in the understory, as well. The marsh is occupied by a number of these tree species, and eventually would support a riparian forest, similar to the one south of Highway 12.

Wildlife Habitat Quality

Wildlife habitat is poorly represented in the Study Area, except in the riparian corridor and marsh, where it is rich and varied. In terms of cover and feeding opportunities, the diversity is high and the plant community can and does support large populations of numerous species of fauna. The importance of succession in the vegetation is that wildlife habitat quality improves as the vegetation diversifies. Lists of birds and animals which have been observed in the area, along with their habitat requirements, are listed in Appendix B of the Sebastopol Bypass EIR. Special features of the Study Area are the abandoned sewage treatment ponds,

which support a variety of water birds.

Constraints

The only part of the Study Area that can be considered to possess significant resource value is the riparian corridor and marsh. If a road were contemplated through the marsh, much less resource value would be lost if the right-of-way were to veer to the west of the line of oak trees (Figure 12), immediately adjacent to the ready-mix concrete plant, as shown on Figure 13.

Recommendations

If the right-of-way were to be in the marsh, a minimum of 50,000 square feet of marsh (approximately one acre) would be taken. It is recommended that the area between the road and the Laguna be managed to increase the acreage and diversity of wildlife habitat, in order to compensate for the loss of marshland. It is also recommended that at least one of the abandoned sewage treatment ponds be retained, to be managed according to recommendations of the DFG, or other knowledgeable group.

With the present species composition and no disturbance, habitat quality would be soon improved with little management or cost, other than control of past dumping and clearing activities. Specific management measures are available for consideration, following selection of a specific alignment.



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North Extension
Sebastopol Bypass Route 6
Sebastopol, California

VEGETATION
FIGURE 12

2.60 NOISE

A. Description

Noise is defined as unwanted sound which interferes with speech or hearing or is otherwise annoying. (Hearing impairment can occur when a person is exposed to 73dB's [decibels] for an eight hour period, or 70dB's for a 24-hour period.) Such levels are not that uncommon in an urban environment, especially near a traffic corridor. In the Study Area, noise is limited to two sources: traffic from Highway 12 and from industrial use. The latter is an intermittent source and is seldom a major problem.

Traffic noise is not considered to be a significant problem in the Study Area, even during peak hour traffic. The CalTrans noise contours, prepared in 1973, identified the (then) existing and the projected noise contours along the Highway 12 corridor. These contours are based on generalized criteria, and should not be used to evaluate specific projects. Noise measurements taken during the course of this study do not substantiate the noise contours presented in CalTrans; we found noise levels below those projected by CalTrans.

B. Constraints and Recommendations

In the Study Area, only two types of sensitive receptors are identified: residential units and wildlife. Both will be expected to be affected, to some degree, by traffic noise. Noise can be attenuated through use of sound barriers or set backs. If the Bypass were to pass through, or adjacent to, the Eddie Lane residences, noise barriers might be necessary.

2.70 ARCHAEOLOGY

A. Description

The Study Area was the subject of a literature search and field survey by a qualified archaeologist.

The results of the study are largely inconclusive. The literature search reveals that no previously recorded archaeological sites exist within the project area. The lack of sites may be due, however, to the need for systematic field work. The project area is located in a very archaeologically -sensitive area, adjacent to the Laguna de Santa Rosa.

An on-foot reconnaissance of the entire 55 acre parcel was undertaken after completion of archival research. A substantial portion of the project area is covered by fill and/or structures which preclude visual inspection of the ground. Of the 55 acres, approximately 10 acres appear to be composed of original, relatively-undisturbed, marshy soil. One hundred percent of the project area has been subjected to some type of ground disturbance activity. Approximately 80% of the project area could not be visually inspected, due to the presence of fill material, structures and/or roads, and irrigation ponds. Roughly 50% of the remainder that could be visually inspected was obscured by dense vegetation. The area adjacent to the Laguna de Santa Rosa, for example, is covered by dense thickets which extend westerly, in some areas, for about 50 meters. In short, due to natural and human-induced constraints, only a small portion of the project area was visually inspected.

B. Constraints

It is possible that archaeological sites exist, buried under natural alluvium or fill. Such archaeological sites are not uncommon along the margins of the Laguna de Santa Rosa. Therefore, the area is designated as having high probability for archaeological sites.

C. Recommendations

If selection of a preferred alignment is within an area that is presently undeveloped, the following recommendation is presented by the archaeologist: disc the flat, open fields to be subjected to inspection, and have them reinspected by a qualified archaeologist. Most of these areas were covered with a dense growth of grasses and weeds which, in some places, totally obscured the ground's surface.

For the preferred alignment, the following recommendations are made:

- [1] Prior to the removal of any structures, they should be evaluated for historical significance by a qualified historic architect.
- [2] An archaeological monitor should observe the removal of fill material, structures and/or roads in order to determine the presence or absence of archaeological sites.
- [3] All subsurface ground disturbances should be monitored by a qualified archaeologist, because the possibility of buried archaeological sites is high.
- [4] Should archaeological sites be located as a result of activities [1] and [2] above, the consulting archaeologist should make site-specific recommendations for preservation, which the City of Sebastopol should be prepared to implement.

2.80 OTHER FACTORS

Issues relating to climate, air quality, energy conservation, visual quality and public services and utilities are not considered to be limiting to development of the Bypass, and therefore do not require an in-depth analysis. They are briefly discussed below.

1. Climate, Air Quality and Energy Conservation

Climate conditions in this portion of Sebastopol are comparable to other areas. Climate would have no constraining effect on a project such as a bypass. Air quality, even though this is an industrial area, is good. Some problems associated with odors have been identified. This is not a constraint to a bypass; a bypass can even be considered as being an appropriate land use in an industrial area. Energy conservation is an issue which needs to be considered. The goal of reducing energy use is seemingly contradictory to the installation of a bypass. It could be argued that a Bypass will encourage traffic. It is the Consultant's belief, however, this will not be the case, because the Bypass would be designed to accommodate existing and already-projected traffic. The Bypass is not expected to be growth-inducing, because it would have limited access. Assuming limited access, the Bypass would be relatively energy conserving, in that it will result in improved traffic flow.

2. Visual Quality

The visual or scenic character of the area is not considered to be of a constraining nature. Generally, the area has an industrial character. Along the eastern and northern edge, along the Laguna's riparian corridor and at the ballfield, a feeling of open space is experienced. The City has proposed an open space and park corridor adjacent to the Laguna, which would connect with the ball field (see Section 3.80, Land Use). The Bypass should be designed with overall scenic quality in mind, so as not to result in a visual impact. Since noise barriers are not needed, except adjacent to the residential area along Eddie Lane, no major visual problems are expected.

3. Public Services and Utilities

The City owns considerable land within the Study Area and a number of City facilities have been developed in the area: abandoned sewage treatment facilities, corporation yard, sewage lift station, community services, and ball diamond. All of these uses could constrain the Bypass and are discussed elsewhere. Other services such as Police and Fire do not constrain a Bypass and would benefit through the access provided by the proposed project.

3.00 SUMMARY

3.00 SUMMARY

3.10 CORRIDOR SELECTION

No route through the Study area has been chosen for the Bypass.

Five corridors can be identified; these are, from west to east:

1. Petaluma and Santa Rosa Railroad Spur;
2. Industrial Buildings;
3. Morris Street;
4. East of Morris Street;
5. Edge of Laguna de Santa Rosa.

Of these five, corridors number two and four would require destruction of existing buildings, and can be immediately rejected. The Industrial Building Corridor (2) would require the removal of a group of buildings at a time when an assessment district has been formed to improve the area for maintenance and expansion of industry. The East of Morris Street Corridor (4) would require removal of the Sewage Lift Station and the Concrete Plant. For these reasons, these two corridors are assumed in this study to be unreasonable alignment locations, and are not considered further.

In the Factor Analysis (2.00), a number of potential constraints to location of a Bypass right-of-way in the Study Area have been identified. These constraints are listed in the following table, Summary of Constraints. The three corridors (Petaluma and Santa Rosa Railroad Spur, Morris Street and Edge of Laguna de Santa Rosa) are arranged against the constraints and, where they apply, notations are made on the table. Constraints are identified as "For The Record Only" (R), or "Moderate" (M), or "Significant" (S). Constraints are divided into two categories: Land Use (LU) and Physical (P). Where further study is needed, the type of follow-up work is noted.

Corridor Description

The Laguna Edge Corridor alignment would begin at Highway 12 and continue north through the baseball facility and through the abandoned sewage treatment ponds beyond. The Morris Street Corridor alignment would connect with Route E at Highway 12 and continue up Morris Street. Segments of two frontage roads serving the industrial parks on either side of Morris Street would be required. At the Johnson Street intersection, the alignment would traverse the abandoned

sewage treatment facility and/or landfill, and then continue north of the Study Area. The Railroad Spur Corridor would require a realignment of the Route E Southern extension Bypass along the spur line, to the south of Highway 12. The alignment would include the railroad tracks, and continue through to Johnson Street. At least three industrial buildings (two privately-owned and one City-owned building) would possibly be "taken", along with one or two homes on Eddie Lane. An alternative is to veer the alignment to the east and pass through the old sewer plant property. This would cut short Morris Street.

No assumption has been made concerning a continuation of the Bypass to the north, except that it would somewhere curve to the northwest and connect with High School Road. It is not necessary that a corridor continue in the same direction throughout its length. All three corridors could curve to pass through the landfill or the houses on Eddie Street, for instance. The choice of corridor at the north end would largely depend on the eventual route beyond the City Limits/Study Area. To the north, beyond the Study Area, one dairy ranch extends from the Laguna to High School Road. Unquestionably, any Bypass extension would cross some part of this property. If the alignments did not curve to the west, an extension of the Laguna Edge Corridor would possibly pass through the ranch's eastern fields. The Morris Street Corridor would probably pass through the center of the fields, as would the Railroad Spur Corridor. Any of the right-of-way corridors could curve to the west, as described above, and pass through the southwestern part of the ranch before connecting with High School Road.

Summary Of Constraints

ALIGNMENT

RATING
Railroad
Morris
Laguna
Bridge
FURTHER STUDY NEEDED

CONSTRAINT

2.10 PLANNING AND LAND USE

1. Existing Structures
2. Proposed Youth Park Project
3. Morris Street Improvement
4. Existing Baseball Facilities

2.20 TRAFFIC AND CIRCULATION

1. The spur line of the Petaluma and Santa Rosa Railroad, west of the cannery, is considered an active line and available for use at the request of users.
2. An assessment district has been organized, and plans are being completed to improve Morris Street.

Comparison of Specific alignment will indicate least extent of conflict. Coordinate with Youth Park Project. Coordinate with Assessment District. - - - - -
- - - - -
Coordinate with Assessment District.

Summary Of Constraints

ALIGNMENT

RATING
Railroad
Morris
Laguna Bridge
FURTHER STUDY NEEDED

CONSTRAINT

3. A distance of 400' from the Laguna bridge to an intersection with the Bypass would be desirable.
4. A signalized Bypass intersection at Highway 12, in conjunction with signals at Morris Street and Petaluma Avenue would result in a spacing problem, timing problem and an inadequate distance from the Laguna Bridge.

2.30 GEOLOGY AND SOILS

1. Soil Liquefaction could occur during strong shaking.
2. Damage from other geologic hazards is considered remote.
3. As much as 10 feet of fill would be required if the roadway crossed the marsh.
4. Slightly more than one acre of soils rated as Prime Agricultural Soils would be covered. In reality, since it is marshland, surrounded by fill and zoned manufacturing or community facility, it is unlikely the soils would be used for agriculture.

Specific Alignment needed, coordinate with other constraints and South Bypass.

Specific Alignment needed, coordinate with other constraints and South Bypass.

n/a

Detailed geologic investigation, coordinate with wildlife habitat concerns.

n/a

Summary Of Constraints

ALIGNMENT

RATING Railroad Morris Laguna Bridge FURTHER STUDY NEEDED

CONSTRAINT

2.40 HYDROLOGY AND DRAINAGE

1. The eastern half of the Study Area is poorly drained, supports standing water during the winter, and more than 10 acres are still covered with marsh plants.

2.50 VEGETATION AND WILDLIFE HABITAT

1. Significant resource value would be lost if a road were built through the marsh or along the edge of the riparian corridor.
2. The abandoned sewage treatment ponds have become valuable wildlife habitat, especially for water-oriented birds.

2.60 NOISE

1. Traffic will affect sensitive receptor
 - a. Residential
 - b. Wildlife

2.70 ARCHAEOLOGY

The area is designated as having high probability for archaeological sites, although a literature search and on-foot reconnaissance did not reveal presence of such sites.

Determine adequacy of present drainage facilities. Engineering study.

Investigate management for enhancement of adjacent habitat.

Investigate management for enhancement of adjacent habitat.

Investigate noise barriers.

n/a

Inspection of selected alignment following surface preparation.

3.20 CORRIDOR COMPARISON

The number of constraints listed in Table 3 is not necessarily a measure of the potential (or lack of potential) of a corridor for a right-of-way. A number of the constraints can be reduced or eliminated, depending on the results of more detailed study.

In Table 2, constraints are divided into Physical Constraints (wildlife habitat conflicts, fill and drainage needs and traffic standards) and Land Use Constraints (conflicts with existing buildings and on-going studies). While the Laguna Edge Corridor is primarily affected by physical constraints, the Baseball Facility and the Youth Park Project are land use constraints. Because the Morris Street and Railroad Spur Corridors are in already-developed areas, the constraints are primarily associated with land use.

Laguna Edge Corridor

Physical Constraints

Because of its undeveloped status, and its location near the Laguna, there have been a number of identified physical constraints. Most of these are related to the necessary fill across the marsh. The need for fill could be reduced (but not omitted) by maintaining an alignment to the west side of the corridor, as close to the concrete plant and sewage lift station as possible.

Other physical constraints relate to the position of the Bypass intersection with Highway 12. An intersection within 300' (east) of Morris Street would conflict with the Morris Street intersection. If the Bypass with Highway 12 intersection were within 100' of the Morris Street/Highway 12 intersection, the two intersections would need to be signalized and timed to operate as one intersection. This arrangement often results in inefficiently operating intersections.

If the intersection were to be moved toward the east, there would be need for a three lane addition to the Laguna Bridge. The Southern leg of Route E would need to be relocated and would displace as many as 12 mobile homes from the Village Park Mobile Home Park. The Laguna Bridge will eventually need to be replaced, anyway, to serve increased volumes of traffic.

Land Use Constraints

At least one of the abandoned sewage treatment ponds would need to be filled, in order to continue the Bypass to the north, along the Laguna. Two associated land use constraints near the north end of the corridor are the existing baseball facilities and the proposed baseball diamond (Youth Park Project). The existing baseball facilities would need to be moved to another location, possibly to the north of the Community Center, if the Bypass alignment were to continue in that direction. The impact on the Youth Park Project could be mitigated through redesign/relocation of the ball diamond and proposed parking.

Morris Street Corridor

Fewer constraints are associated with the Morris Street Corridor, but the land use conflicts associated with the assessment district would need to be resolved. Resolution of this matter would require re-adjustment of access to individual parcels within the Assessment District through a Bypass/Frontage Road arrangement (outlined on Figure 14). The number of assessment district-related vehicles trying to enter Morris Street during commute hour would result in a congestion level similar to half again the current congestion on the Morris Street/Highway 12 intersection. If this becomes an unacceptable level, a signal could be installed at the northern intersection along Morris Street.

At the north end, it is assumed that the site of the abandoned sewage treatment facilities could be used for the Bypass. Arrangements would need to be made for access into the Community Recreation Facilities, to the east.

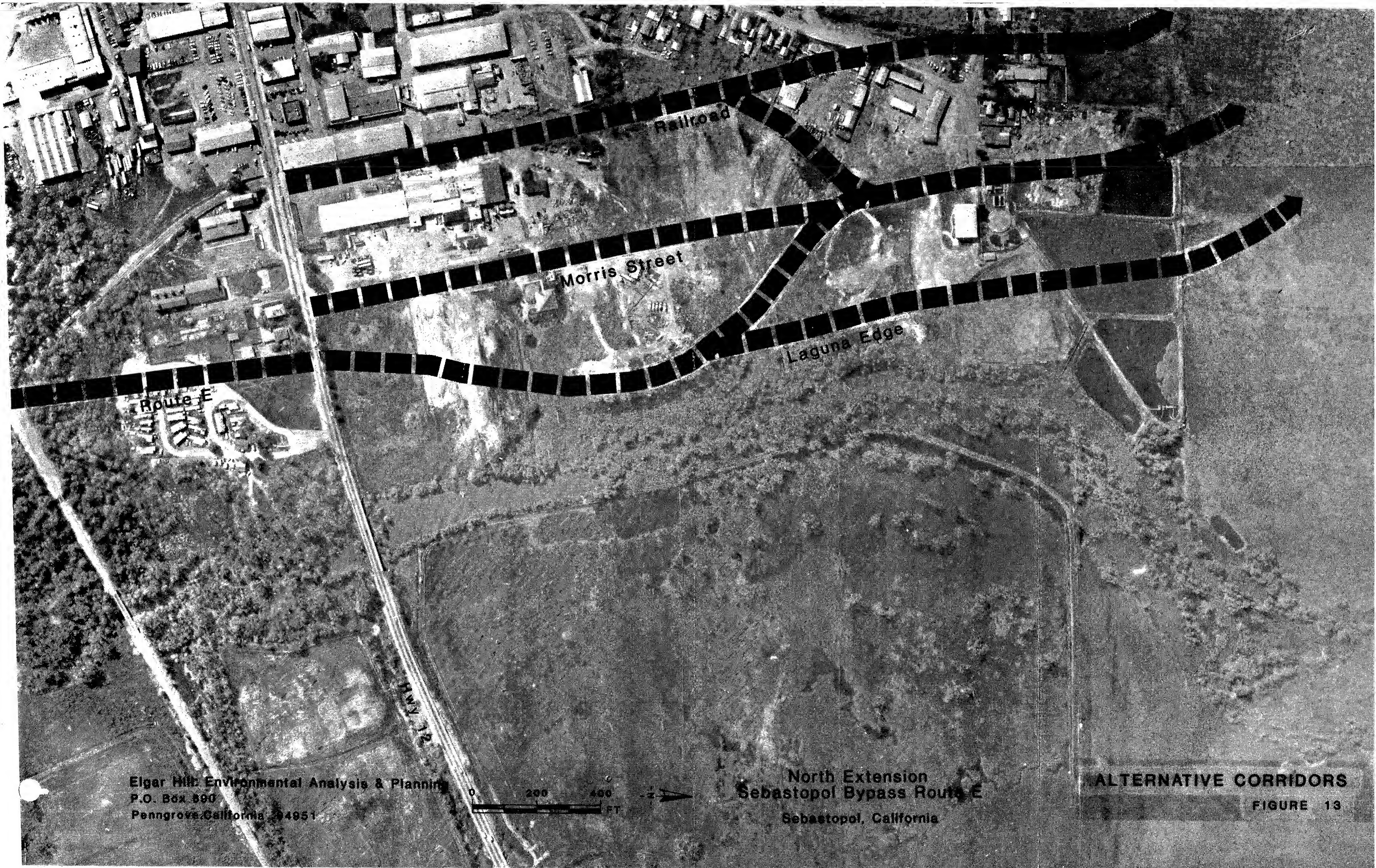
This route would cross alluvial deposits and previously filled marsh lands. Acquisition of a right-of-way on the west side of Morris Street, which is already filled, would require less new fill than expanding the road to the east. This alignment would probably require more fill than the route along the Railroad Spur Corridor, but not as much as Laguna Edge route.

Railroad Spur Corridor

Constraints associated with this corridor are primarily limited to land use, and relate to the railroad spur itself, as well as private property and residences towards the north end. The railroad spur is considered to be active, but the

entire Petaluma and Santa Rosa right-of-way may be abandoned in the near future. At this time, no timetable has been set for abandonment, although application has been made to the Interstate Commerce Commission by Southern Pacific to do so. Bypass plans cannot presently assume that the railroad spur will no longer be used. In addition, some interference with cannery operations could result from location of the Bypass in this corridor. These uses primarily include trucking and storage operations associated with the cannery. Establishment of a right-of-way would require negotiations with several owners (Barlow, Petaluma and Santa Rosa Railroad, Milerick, homeowners, etc.). At the midpoint of the corridor, a vegetated depression would require fill and drainage facilities, in order to support a roadway. To the north of the rail road tracks, two privately owned industrial buildings, and a part of the City's corporation yard would need to be relocated. North of Johnson Street/Morris Street, one or two homes would need to be "taken" or relocated. It is possible, however, that the alignment could veer to the east, avoiding the buildings and homes and "taking" the sewage treatment facilities instead.

Figure 13 shows potential alignments in the three corridors. These alignments are based on the text discussion and are presented only to facilitate decision making.



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North Extension
Sebastopol Bypass Route E
Sebastopol, California

ALTERNATIVE CORRIDORS
FIGURE 13

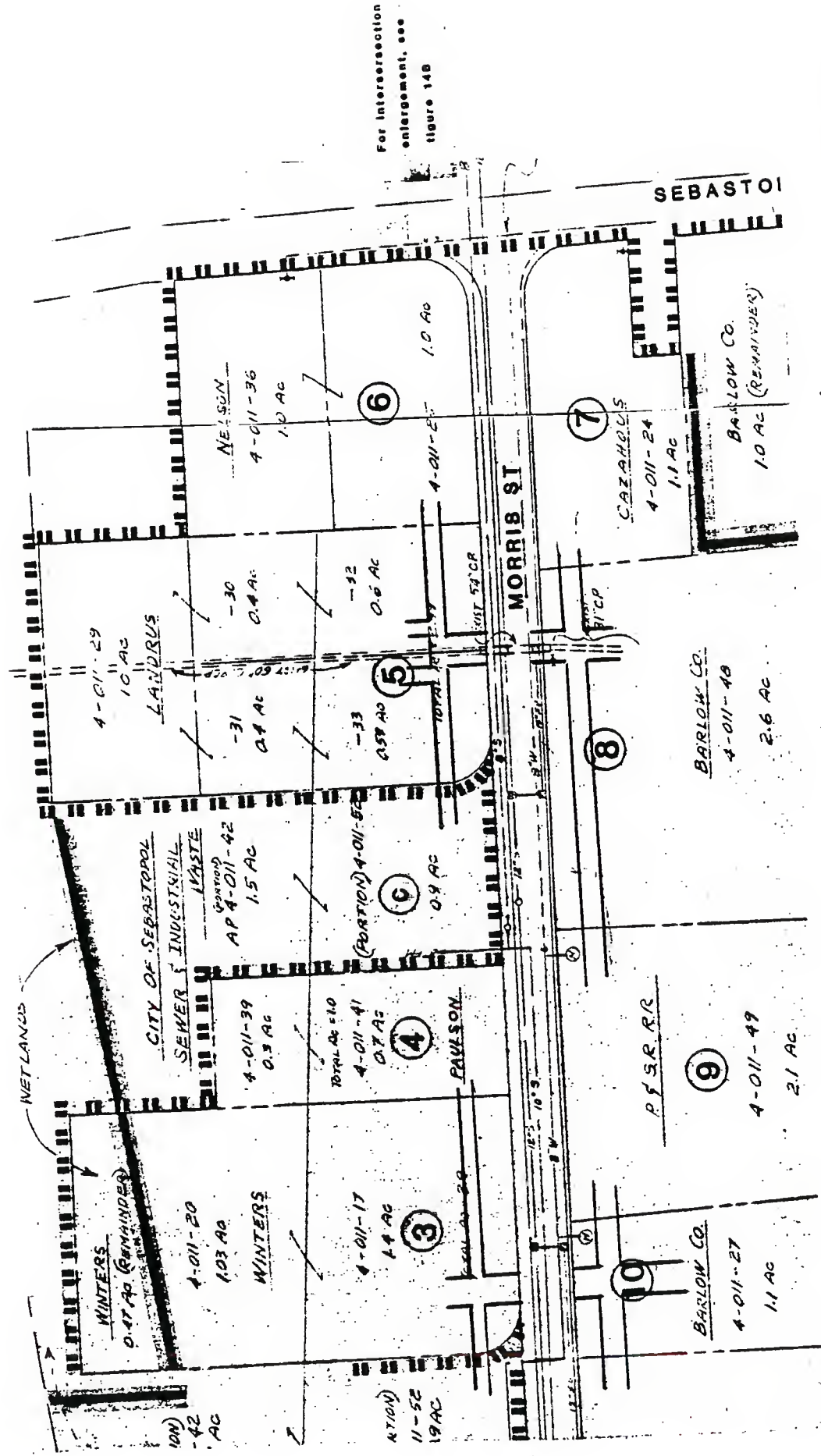
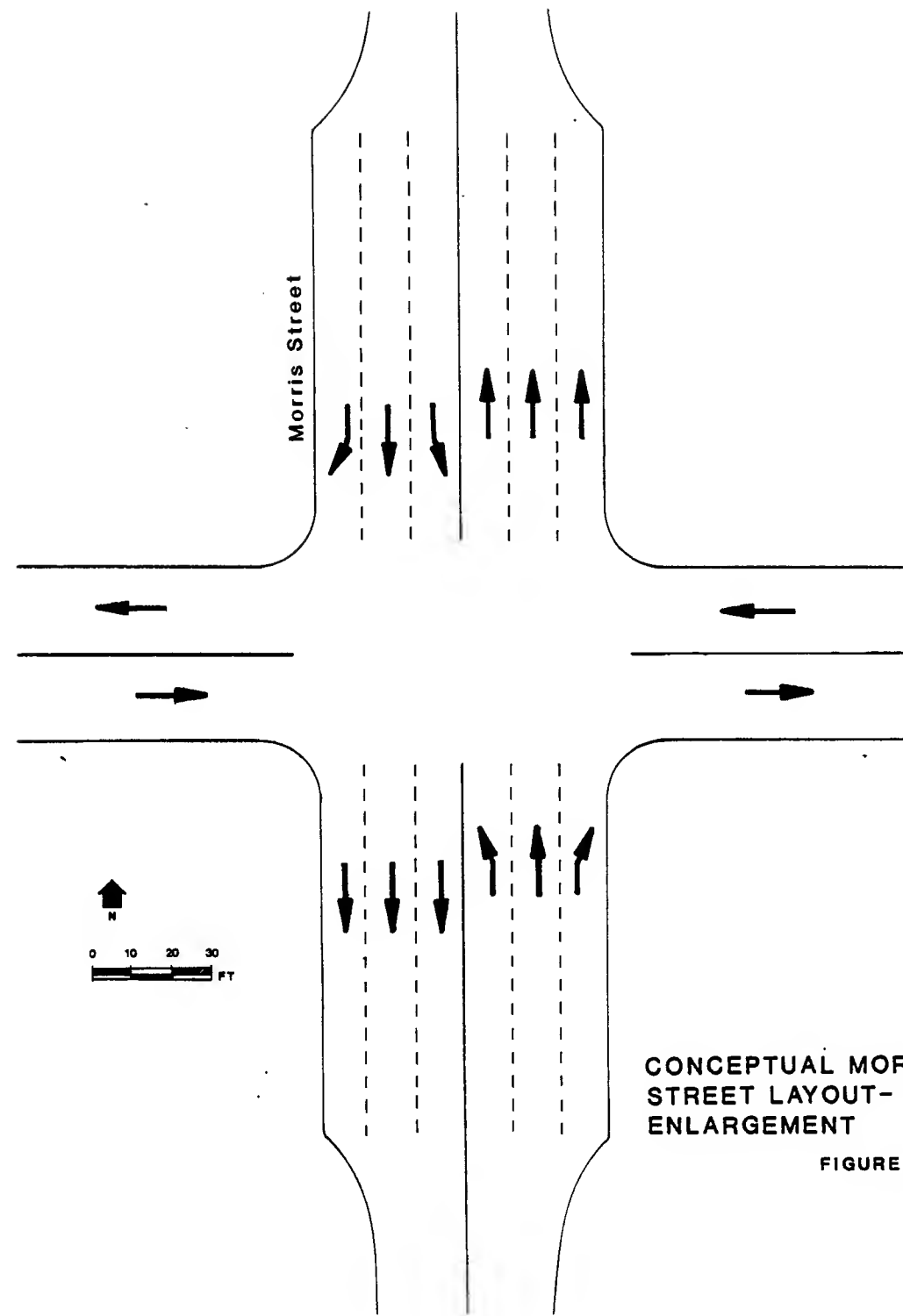


FIGURE 14A

CONCEPTUAL MORRIS STREET LAYOUT



CONCEPTUAL MORRIS
STREET LAYOUT-
ENLARGEMENT

FIGURE 14B

LIST OF CONTACTS

Melvin Davis, City of Sebastopol

Walter Laabs, City of Sebastopol

Paul Schoch, City of Sebastopol

Bruce Aspinall, City of Sebastopol

Charles Baker, City of Sebastopol

Larry Koverman, City of Sebastopol

Tom Barlow, Landowner

Henry Ortiz, Southern Pacific

Mr. Anderson, Southern Pacific

Cal Gerhardt, Petaluma-Santa Rosa Railroad

Allan Buckmann, Department of Fish and Game

NOTE: many of the contacts for Route E Bypass EIR also commented on this project.

STAFF

Elgar Hill	Principal-in-Charge
Nadine Sponamore	Project Coordinator
Don Goodrich	Traffic Engineer
Rex Upp	Engineering Geologist
Michael Cleary	Geologist
Jay Flaherty, Archaeological Services	Archaeologist
Phil Northen	Reviewing Ecologist
Linda Smith-Johnson	Graphics
Laurie Schaeffer	Production

APPENDICES

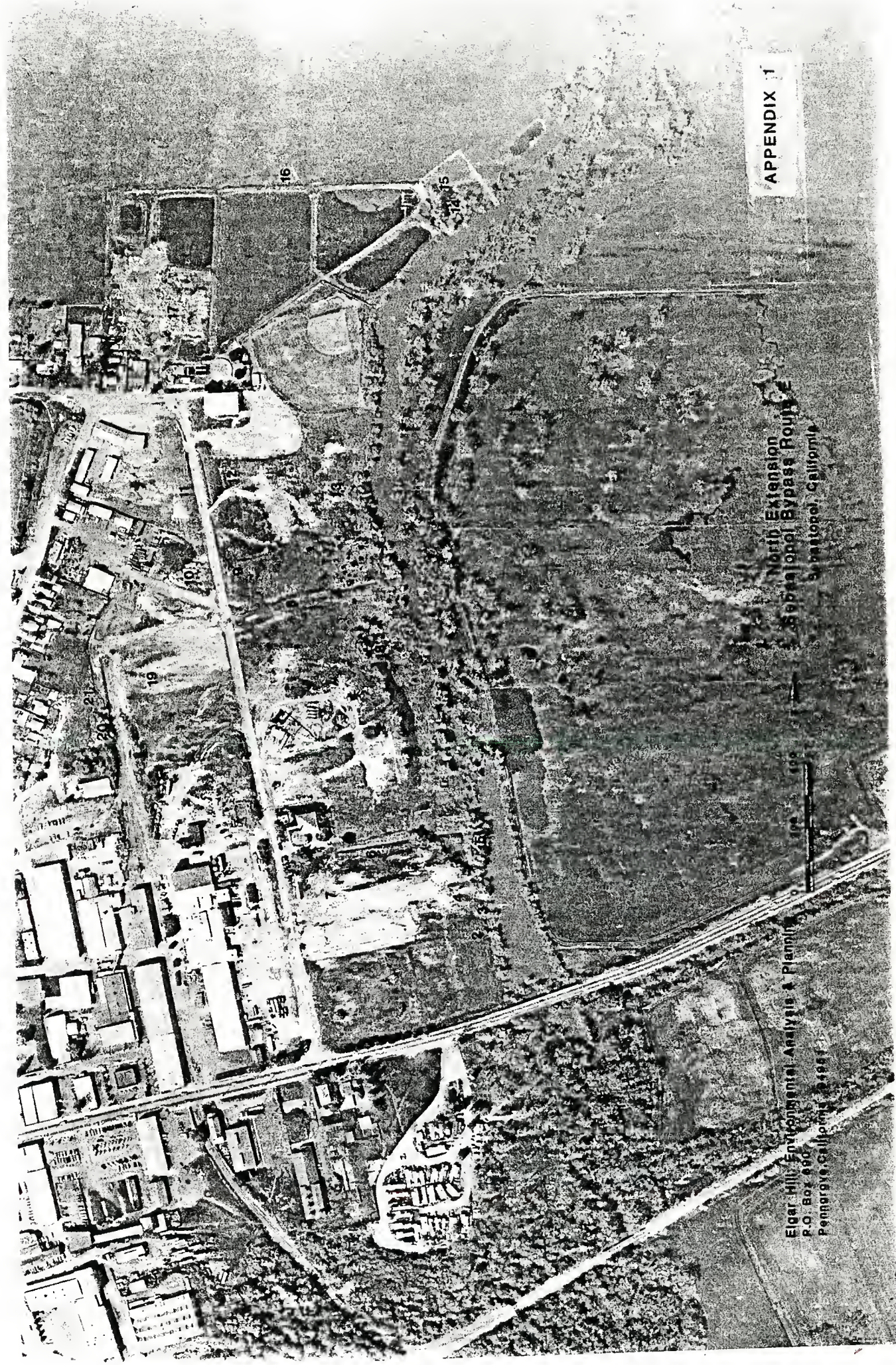
FIELD NOTES

North Extension, Sebastapol Bypass

- ① Open lot, south part recently plowed. Topsoil is yellow-brown SAND, slightly moist, with occasional gravel.
- ② Change in topsoil - Black sandy clay, moist
- ③ Bank of Laguna - 8' high flood control bank or levee
- ④ Five foot wide drain pipe (concrete) buried five feet down. Drains into slough which drains into Laguna. Needs 10-12' fill to cover.
- ⑤ Low lying flood area. Inundated during winter. Approximately 5 feet below level of open lot, 5' above Laguna water level. Currently a marshy area
- ⑥ Continuation of flood area, low lying depression approximately 3-5' below open lot - street level. Drainage ditch 8' wide and 6-7' deep.
- ⑦ Yellow-brown SAND, medium sand, moist, probable fill, with concrete fragments
- ⑧ Dark brown sandy silt in low lying area
- ⑨ Low lying marshy area bordering slough. Covered with thick grasses and weeds. Soil is dark brown to black sandy clay (OH/CH) with organics. Wet to saturated at surface near road. Elevation is 5' below level of Morris Road.
- ⑩ Open lot, gently sloping to west 2-5°
- ⑪ Fill pad. Fill slope along Morris Road
- ⑫ Brown, silty sand with 15% coarse gravel, occasional rounded cobbles, slightly moist, Qaf, Pad level 10' above low lying area, 5' above Morris Road.
Well compacted, dry.
- ⑬ Reed patch, very wet, Laguna vegetation is blackberry, reeds, willows, water plants, 10-12' below level of plateau, steep bank.
- ⑭ Small depression only 1 1/2' below pasture land.

Field Notes, continued....

15. Covered with water dependant plants, soil is black sandy clay-saturated. spring here maybe seepage from sewage treatment ponds.
16. Pastureland - brown fine sand, moist at surface. old flood plain terrace
17. Fill debris piles - partially leveled and graded
18. Closed depresssion - finger shaped pebbles, old channel. Dry inundated in wither. To north, not well defined area covered with grasses, rose hips, cockle burrs, oxbow Lake geomorphic feature. Soil soft, boggy
Desication cracks in bottom indicate recent inundation.
19. Dumped fill in piles over old depresssion.
20. Small depression and drainage at base of low hill, 5-8' deep.
21. Merced Formation underlying low gently rolling hillside slope at 6° uphill to west



APPENDIX 1

North Extension
Sebastopol Bypass Route
Sebastopol, California

Elgar Hill Environmental Analysis & Planning
P.O. Box 890
Petaluma, California 94951

DEPARTMENT OF PARKS AND RECREATION

P.O. BOX 2390
SACRAMENTO 95811
(916) 445-2358

APPENDIX 2



JUL 28 1983

*For document
grant*

Mr. Melvin K. Davis
City Manager
City of Sebastopol
2120 Bodega Avenue
Sebastopol, CA 95472

Dear Mr. Davis:

I am pleased to inform you that your grant request for the Laguna Youth Park Development project has been selected by the State for funding from the Land and Water Conservation Fund (LWCF) in an amount up to \$75,600.

Because it is in the best interest of the LWCF Program to expend grant funds and complete projects as rapidly as possible, we are continuing our policy of imposing a deadline for submission of plans and specifications in order to accelerate project completion. Accordingly, plans and specifications must be submitted to the State Department of Parks and Recreation by January 1, 1984. ←

Although you may proceed with the preparation of plans and specifications immediately, you are cautioned not to begin advertising for bids or begin construction until the National Park Service has approved your project proposal and you have received authorization to proceed from the State.

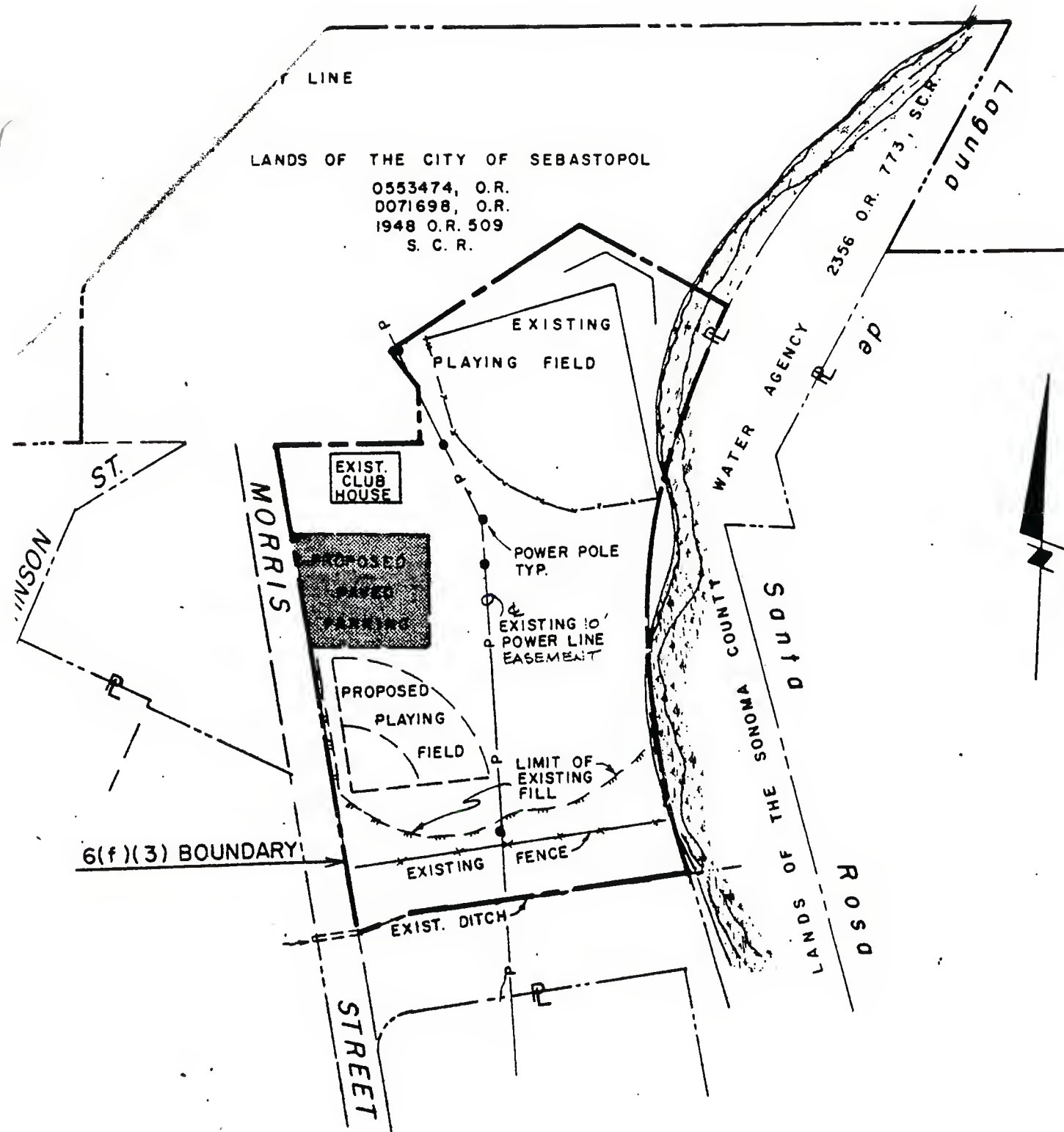
A copy of "Instructions for Undertaking a Development Project", with Attachments A through D, is enclosed to assist you in preparing the required documentation and implementing your project.

Your project will assist in meeting California's pressing need for additional park and recreation areas. I take this opportunity to congratulate you on your timely efforts in this regard.

Sincerely,

Les McCargo
Interim Director

Enclosures



6(f)(3) BOUNDARY MAP
LAGUNA YOUTH PARK
 CITY OF SEBASTOPOL, CALIFORNIA

1"=300' APRIL 7, 1983

PREPARED BY
 PAUL L. SCHOCH, CITY ENGINEER